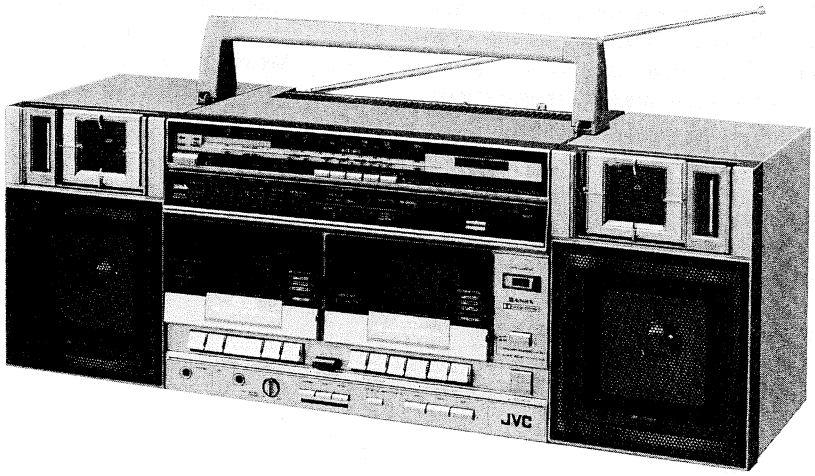
660

JVC

SERVICE MANUAL

PORTABLE COMPONENT SYSTEM

MODEL PC-W330 L/LB/LD



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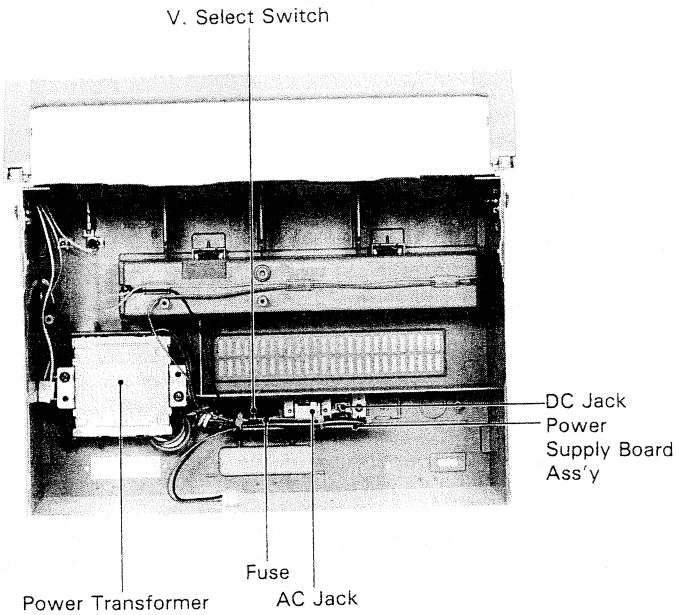
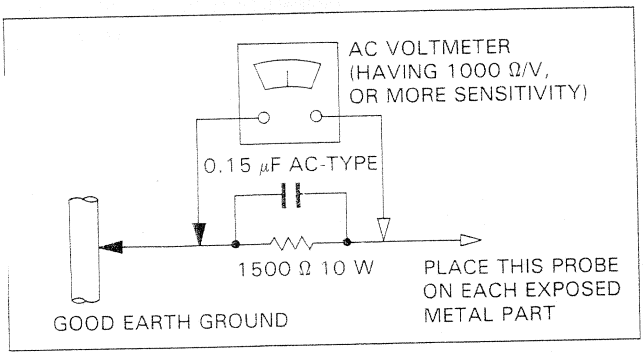
Safety Precautions

1. The design of this product contains special hardware. Many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by (⚠) on the schematics and parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature part, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.



5. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method.
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.).
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s).
     This corresponds to 0.5 mA AC (r.m.s).



Features

1. **Complete double-cassette, auto-reverse component stereo deck.**
   - Consisting of 3 units with attachable/detachable speakers.
2. **Built-in 5-element S.E.A. graphic equalizer.**
3. **Total output of 30 W (15 W + 15 W) Max. (6 Ω, AC), 10 W per channel at 10% THD (6 Ω, AC).**
   - "U-Turn" Auto-reverse deck with soft-touch mechanism. (Deck **A** for playback, Deck **B** for recording and playback.)
   - Pressing the single SYNCHRO START button permits double-speed dubbing of both sides of cassette.
   - During double-speed dubbing, it is possible to enjoy other sources.
   - SYNCHRO REVERSE switch to reverse the heads simultaneously.
   - Relay play facility from deck **A** to **B**.
   - One-touch recording facility for deck **B**.
   - Auto-tape select mechanism for deck **A**.
   - Single music scan facility in both directions for deck **A**.
     "Under license of Staar S.A., Brussels, Belgium".
   - Timer start mechanisms (deck **A** for playback, deck **B** for recording and playback).
   - Microphone mixing facility with volume control during recording/playback.
   - 3-position tape select switch for deck **B**.
   - Can be connected to a turntable.
   - 5-LED peak level indicators.
   - Built-in ANRS/DOLBY* B NR (Noise Reduction).
   - 4-way power supply (AC, batteries, rechargeable battery pack and car battery).
4. **2-way bass-reflex type speaker systems — 12 cm (5") square woofers and 5 cm (2") tweeters.**
   - Using high ceramic cone paper for both the woofers and tweeters.

*Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
*"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Specifications

Radio section

Frequency ranges	: FM 88—108 MHz MW 540—1600 kHz LW 150—350 kHz SW 6—18 MHz
Antennas	: Telescopic antenna for FM & SW Ferrite core antenna for MW & LW Ext. antenna terminal (75 Ω)

Tape recorder section

Track system	: 4-track 2-channel stereo
Motors	: Electronic governor DC motor for capstan/reel × 2 (for Deck **A** & **B**)
Heads	: Deck **A**; METAPERM head for playback Deck **B**; METAPERM head for recording/playback, 2-gap ferrite head for erasure
Tape speed	: At normal speed; 4.8 cm/sec (1-7/8 inch/sec) At double speed; 9.5 cm/sec (3-3/4 inch/sec)
Frequency response (at normal speed)	: 30—17,000 Hz (with metal tape) 30—16,000 Hz (with chrome tape) 30—15,000 Hz (with normal tape)
Signal-to-noise ratio	: 50 dB (weighted, at 1 kHz with metal tape during ALC recording) Improved by 5 dB at 1 kHz and by 10 dB at 5 kHz or more with ANRS/DOLBY B NR ON
Wow and flutter	: 0.09% (WRMS)
Fast wind time	: Approx. 110 sec. (C-60 cassette)

Speaker section (each unit)

Speakers	: 12 cm (5") square woofer × 1, 5 cm (2") tweeter × 1
Impedance	: 6 Ω
Dimensions	: 162(W) × 237(H) × 216(D) mm (6-1/2" × 9-3/8" × 8-5/8")
Weight	: Approx. 2.0 kg

General

S.E.A characteristics

Center frequencies	: 100 Hz/330 Hz/1 kHz/3.3 kHz/ 10 kHz
Control range	: ± 10 dB
Input terminals	: MIC × 1 (Min. input level: 0.7 mV (—63 dBV) Matching impedance: 200 Ω—2 kΩ) AUX IN × 2 (300 mV/47 kΩ)
Output jacks	: LINE OUT × 2 (300 mV/4.7 kΩ), SPEAKER × 2 (matching impedance 6—8 Ω), PHONES × 1 (Output level: 0 ~ 5 mW/8 Ω, Matching impedance: 8 Ω—1 kΩ)
DIN jack	: Mini input level: 0.6 mV/kΩ Input impedance: 10 kΩ Output level: 300 mV/—8 dBs Output impedance: 6.6 kΩ
Power output	: Total output of 30 W (15 W + 15 W) Max. (6 Ω, AC), 10 W per channel at 10% THD (6 Ω, AC)
Power source	: AC 240/220/110 V, 50/60 Hz, DC 12 V ("R20" × 8 or optional BP-12K), Ext. DC (car battery via optional CN-332 car adapter)
Power consumption	: 65 watts (with power switch on) 0.7 watt (with power switch set to STANDBY)
Dimensions	: 663(W) × 312(H) × 224(D) mm (26-1/8" × 12-3/8" × 8-7/8") including speakers connected with joint fixtures, pads, knobs and handle
Weight	: Approx. 10.9 kg (24.0 lbs) with batteries Approx. 10.1 kg (22.2 lbs) without batteries
Accessories provided	: 2 speaker cords (1 m/3.28 ft) Carrying handle AC power cord

Design and specifications are subject to change without notice.

Names of Control and Connection Terminals

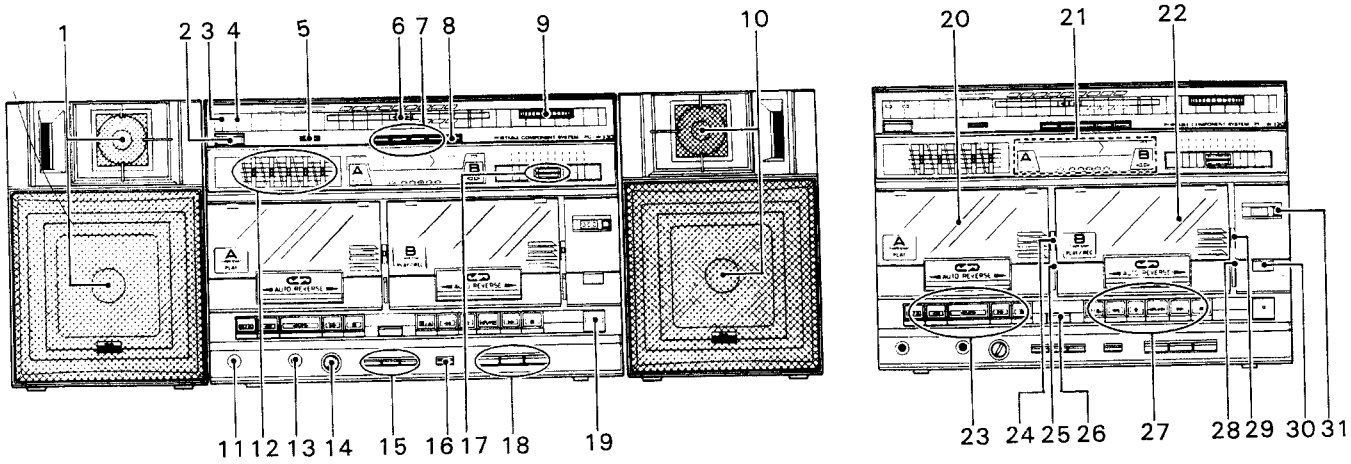


Fig. 1

1. Left speaker
2. POWER switch
3. TUNING indicator
4. FM STEREO indicator
5. FINE TUNING knob for SW reception
6. Dial scale
7. BAND switches (FM/MW/LW/SW)
8. FM MODE/MUTING switch
   (▬) STEREO/ON:
   Set to this position when receiving FM broadcasts or to eliminate the interstation noise occurring when tuning in FM broadcasts.
   (▬) MONO/OFF:
   Set to this position when it is hard to hear the broadcast due to noise.
9. TUNING knob
10. Right speaker
11. Headphones jack (PHONES)
12. S.E.A. controls
    To adjust the output level of the speakers and headphones in each of five frequency bands. The center click position is the standard position. When increasing or decreasing the level, adjust by sliding up to the "+" or down to the "−" direction.
13. MIC (microphone) jacks
14. Microphone/mixing microphone volume control (MIC/MIX MIC VOLUME)
15. TAPE SELECTOR (Deck B)
16. NR SYSTEM switch
17. VOLUME controls
18. FUNCTION SELECTOR
    TAPE. TUNER. AUX/DIN
19. REC MUTE button
20. Cassette holder (Deck A)
21. Indicators (from left to right)
    METAL/CrO2, SYNCHRO REVERSE A ► B RELAY, HIGH SPEED DUBBING, NR SYSTEM, RECORDING, DIRECTION (A), BATTERY, OUTPUT LEVEL, DIRECTION (B)
22. Cassette holder (Deck B)
23. Cassette operation buttons (Deck A)
    ■/⏏ Stop/Eject button
    ◄◄ (Rewind) button
    ◄ PLAY ► button
    ►► (Fast forward) button
    ▮▮ (Pause) button
24. REVERSE MODE switch (Deck A)
    ⟲ : Single playback.
    ⇄ : Full playback.
    ⇄ : Continuous play.
25. DIRECTION switch (Deck A)
26. SYNCHRO START button
    When double-speed dubbing is performed, pressing this button allows deck A play and deck B record to start simultaneously.
27. Cassette operation buttons (Deck B)
    ■/⏏ (Stop/Eject) button
    ◄◄ (Rewind) button
    ○ (Record) button
    ◄ PLAY ► button
    ►► (Fast Forward) button
    ▮▮ (Pause) button
28. DIRECTION switch (Deck B)
29. REVERSE MODE switch (Deck B)
    ⟲ : Single recording or playback.
    ⇄ : Full recording or playback.
    ⇄ : Continuous playback.
30. SYNCHRO REVERSE/A ► B RELAY switch
    (▬) ON:
    Set to this position so the tapes of deck **A** and deck **B** reverse simultaneously and to operate relay play from deck **A** to deck **B**.
    (▬) OFF:
    Set to this position when you don't want synchro reverse or relay play.
31. TAPE COUNTER/reset button (Deck B)

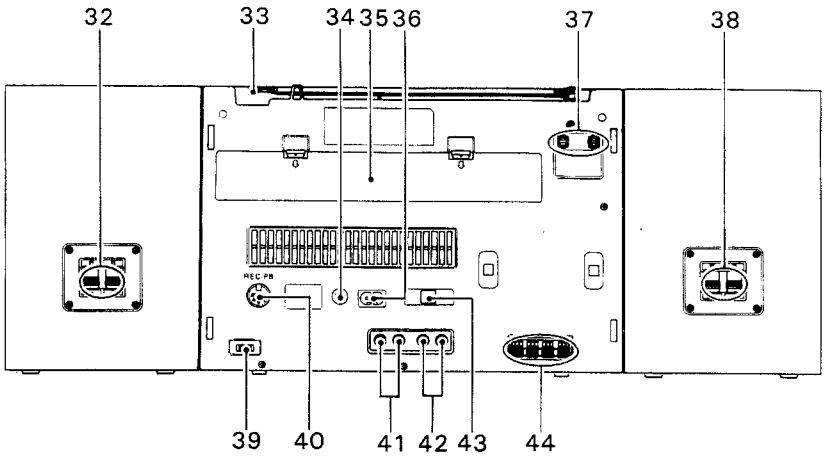


Fig. 2

32. SPEAKER (R) terminals
33. Telescopic antenna for FM or SW reception
34. 12 V DC IN jack (⊖-➔-⊕ 3.15 A)
    When using a car battery (DC 12 V), connect the optional exclusive car adapter (JVC model CN-332) to this jack.
35. Battery cover
    Insert 8 "R20" batteries or the optional rechargeable battery (JVC model BP-12K).
36. AC IN (AC input) terminal
    With the power cord connected, the power is automatically switched to AC current, even if the batteries are inserted.
37. FM EXT ANT terminals for FM & SW reception (PC-W330 L/LB)
38. SPEAKER (L) terminals
39. BEAT CUT switch
    When recording AM broadcasts, beats which are not heard during radio reception may occur. If this happens, set this switch to the position where no beats are heard. Set it to "1 NORMAL" normally.
40. DIN jacks (REC/PB)
    When recording or playing back through external stereo components, hook up is performed via this jack using a DIN connecting cord.

Various Usages

Installation of Speaker Sections

1. As illustrated, fix Ⓐ to Ⓑ firmly and slide down the speaker box securely.
2. Joint the other speaker in the same manner as above.

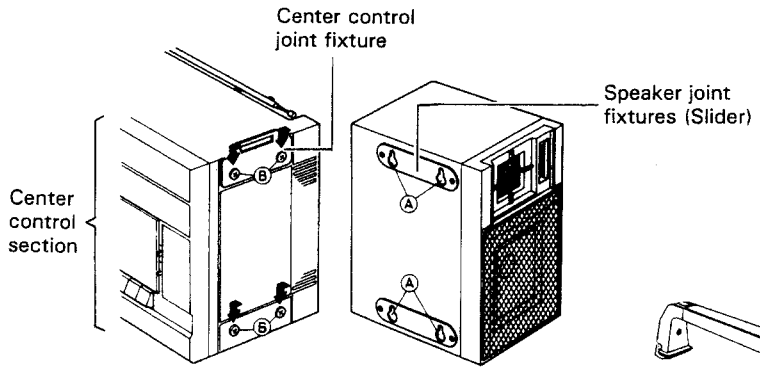


Fig. 3

Mounting the Handle

1. Push the handle grip lock up, in the direction of arrow ①.
2. Pressing mark △ in the direction of arrow ②, secure the handle grip to the slot indicated by arrow ③.
3. Push the handle grip lock down to close it.
   Close the other handle grip lock in the same manner.
   - To detach the handle, perform the same procedure of attaching it.

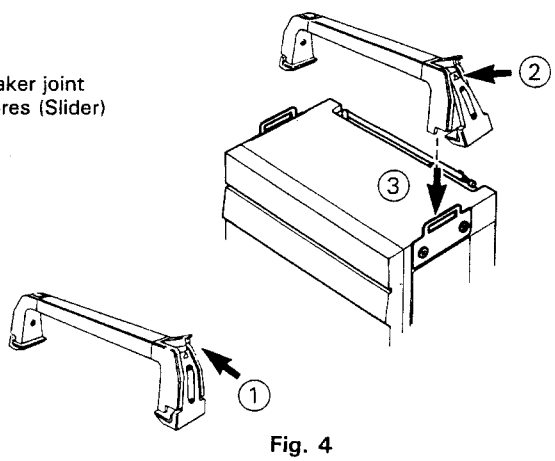


Fig. 4

Location of Main Parts

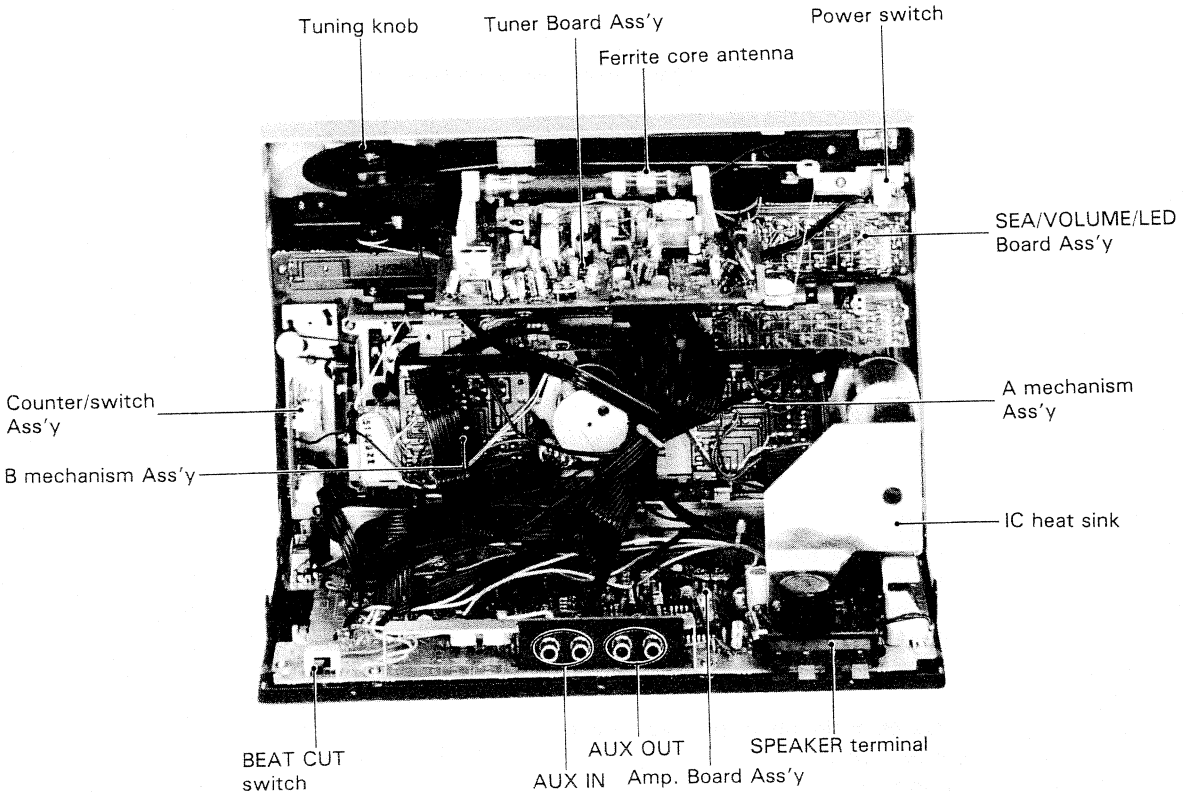


Fig. 5

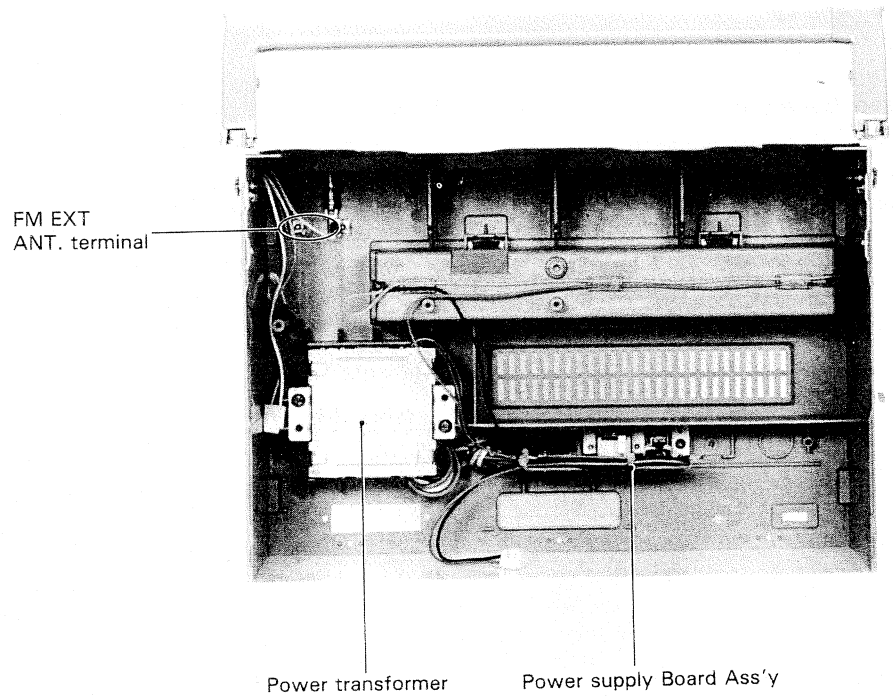


Fig. 6

Mechanism section

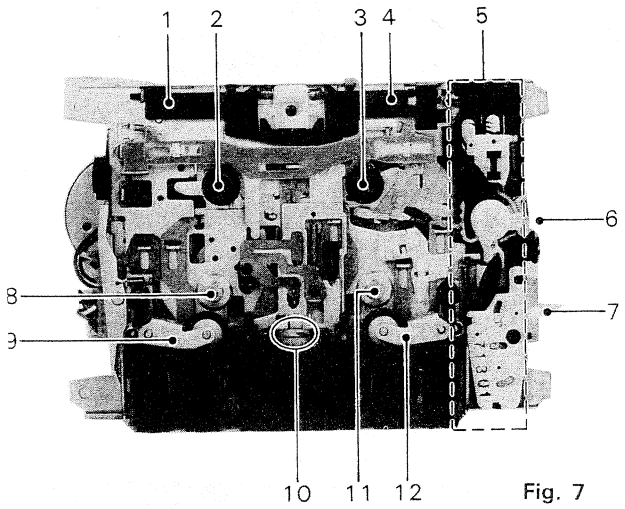


Fig. 7

1. Rec. safety lever (Left)
2. Reel feather (Left)
3. Reel feather (Right)
4. Rec. safety lever (Right)
5. Selector unit assembly
6. Mode select lever
7. Direction lever
8. Capstan shaft (Reverse)
9. Pinch roller arm assembly (Reverse)
10. Head mount base assembly
11. Capstan shaft (Forward)
12. Pinch roller arm assembly (Forward)

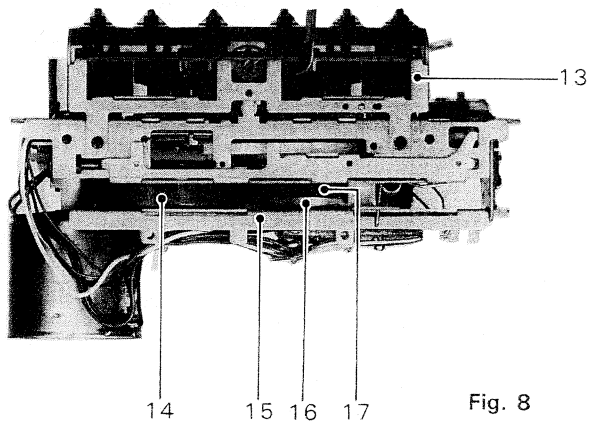


Fig. 8

13. Button frame assembly
14. Flywheel (Left)
15. FM bracket
16. Flywheel (Right)
17. Capstan belt

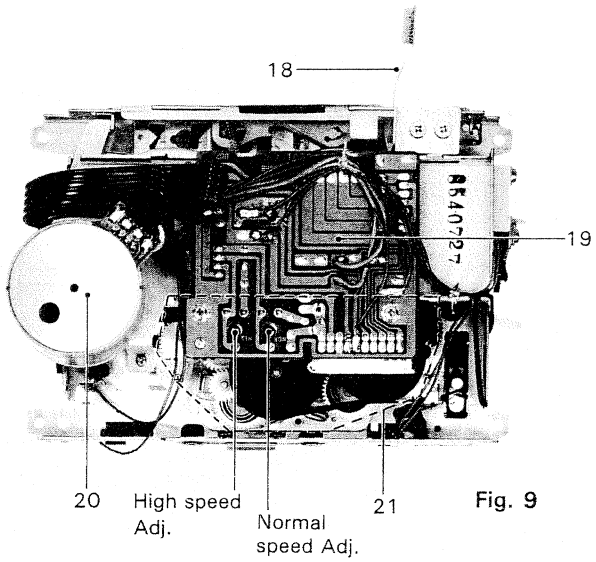


Fig. 9

18. Rec. Spring
19. Speed control Board Ass'y
20. DC motor
21. Reel Ass'y unit

Operating principle of mechanical-logic auto-reverse mechanism is the same as these of the service manual KD-V33 A/B/C/E/E(D)/J/U (No. 4222B).

Removal of Main Parts

Receiver section

* Telescopic antenna replacement can be performed by removing the antenna screw in back.

1. Top cover Ass'y
   1) Remove the eight screws (1) and (2) on both sides.
   2) Remove the five screws (3) and (4) from behind.
   3) Remove the antenna, DIN and DC supply cord connector.

* Fuse replacement
  Remove the top cover for fuse replacement.

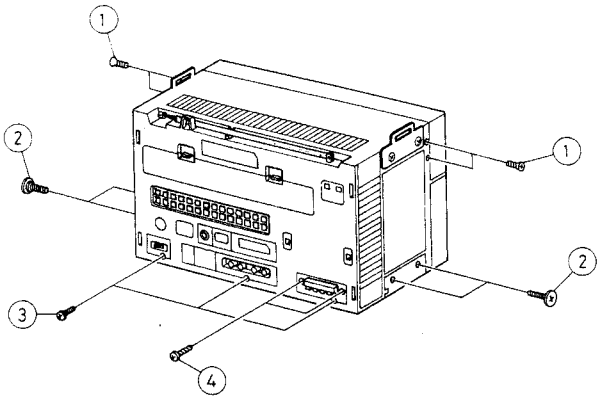
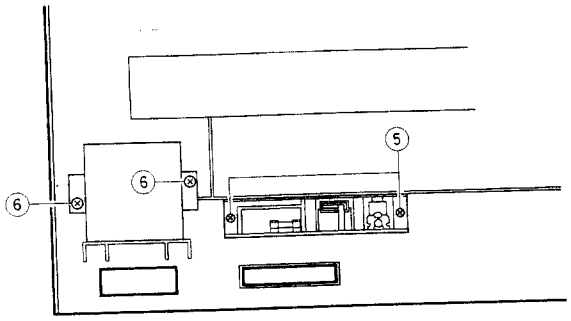


Fig. 10

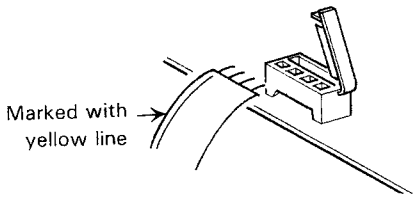
2. Power board Ass'y
   Remove the two screws (5).
3. Power transformer
   Remove the two screws (6).



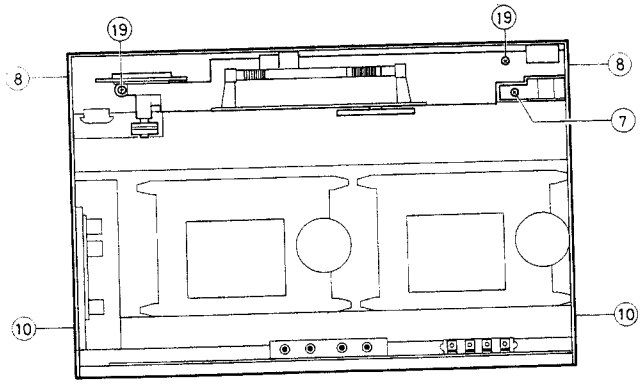
Rear cover inside view

Fig. 11

4. Tuner Ass'y
   1) Remove the parallel wire of connector CN2.



   2) Remove the two screws (19) holding the chassis.
5. Power switch Ass'y
   1) Remove the two screws (8) holding the both side of the front panel. When removing others, also remove the two screws (10).
   2) Remove the screw (7).



Rear side view

Fig. 12

6. SEA LED & volume board Ass'y
   Remove the five screws (9) holding the board.

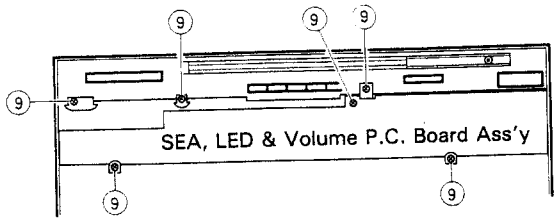


Fig. 13

7. Amplifier Ass'y and Mechanism Ass'y
   1) Pull off the mixing knob.
   2) Remove the seven screws (13) holding the mechanism Ass'y to front cover.

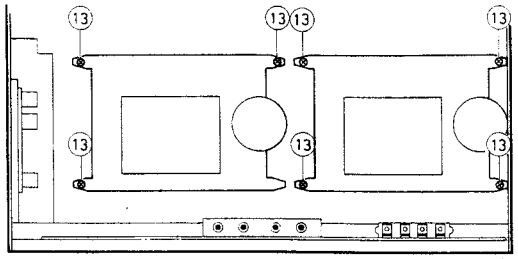


Fig. 14

   3) Remove the three screws (18) from the bottom.
   4) Hang the counter belt to the FM bracket.
   5) Pull out the three knobs (Mixing Volume, and Direction).
   6) Open the door and pull out the mechanism Ass'y.

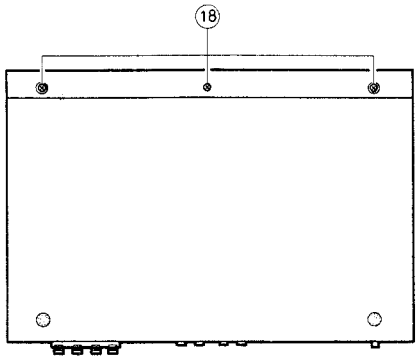


Fig. 15

8. Counter and switch board Ass'y.
   1) Remove the direction switch knob.
   2) Remove the two screws (12) holding the bracket.

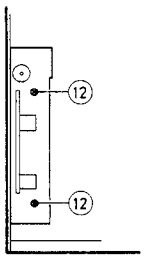


Fig. 16

9. Bottom cover
   Remove the five screws (11) holding the bottom cover and board.

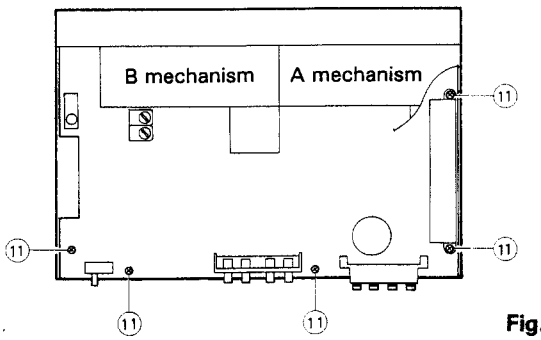


Fig. 17

10. Amplifier Board
   1) Remove the three screws (14) from the bottom (pattern side) of the amplifier board.
   2) Remove the parallel wires from mechanism control P.C. Board.
   3) Un-Solder the head wire of Amp. P.C. Board.

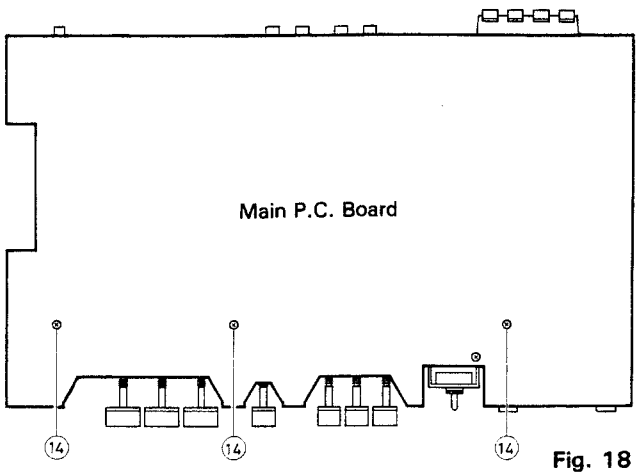


Fig. 18

11. A and B mechanisms
Remove the three screws (16) and (17).

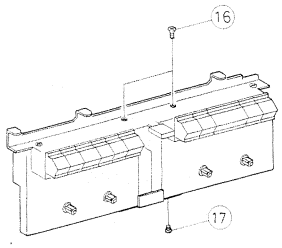


Fig. 19

Mechanism Parts

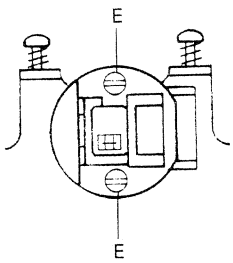
1. Flywheel and belt
1) Remove two screws (B) fastening the F.R. bracket, and remove the main belt.
2) Pull out the flywheel with the reel drive belt.

2. Reel assembly unit
Remove 4 screws (A) fastening the reel ass'y unit.

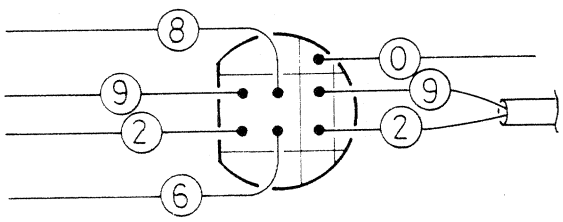
3. Motor
1) Remove two screws fastening the motor from the F.R. bracket.
2) Pull out the motor pulley from the motor shaft.

4. Reel feather
Pull out the reel feather from the shaft.

5. Rec/PB head and Erase head
1) Remove two screws (C) fastening the button frame ass'y.
2) Remove two screws (D) fastening the head ass'y with the head block.
3) Remove two screws (E) (from Head gap side) fastening the head block.



4) Head block wiring



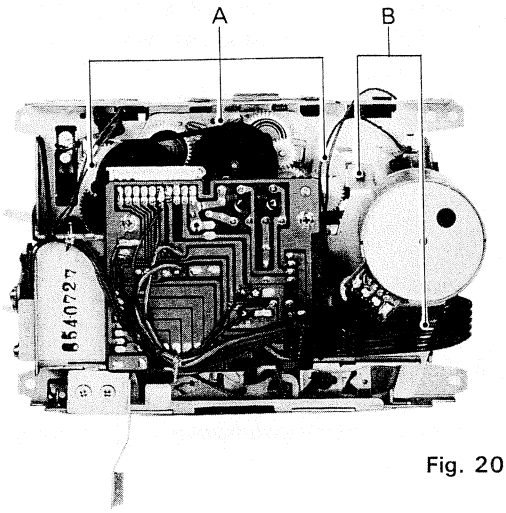


Fig. 20

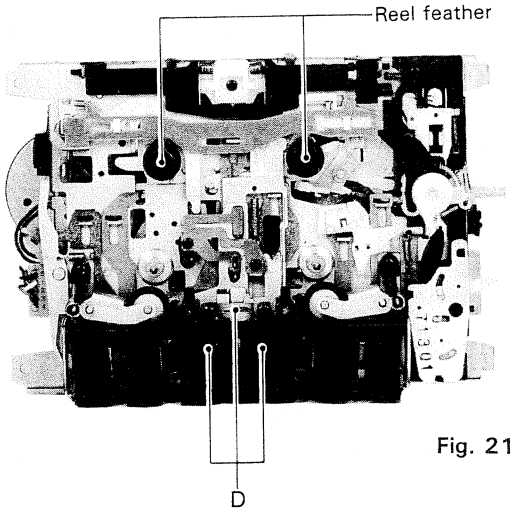


Fig. 21

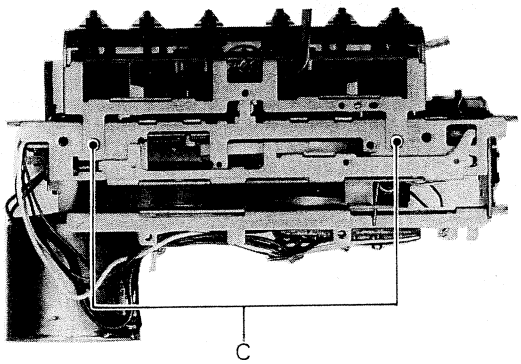


Fig. 22

Main Adjustments

[I] Equipment and measuring instruments used for adjustment

1. Electrical adjustment

1) Electronic voltmeter
2) Audio frequency oscillator
   (range: 50—20 kHz and output 0 dB with impedance 600 Ω)
3) Attenuator
4) Standard tapes for REC/PB
   Maxell UD — Normal tape (TS-5) or equivalent
5) Reference tapes for playback (JVC Test Tape)
   TMT702 (for head azimuth adj.) (14 kHz)
   VTT712 (for motor speed, wow flutter adj.) (3 kHz)
   VTT724 (for reference level 1 kHz)
   VTT739 (for playback frequency response)
   TMT6447 (for music scanning)
   TMT6448 (for music scanning)
6) Resistors
   600 Ω (for attenuator matching)

2. Mechanical adjustment

Torque testing cassette gauge

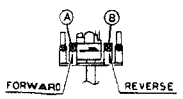
3. Tuner section adjustment

SSG (sweep signal generator)

[II] Mechanical adjustment

Adjustment procedure of cassette mechanism

(Adjust the mechanism or confirm that it is in normal operating condition prior to the adjustment of the electrical circuit.)

Item	Adjustment	Adjusting point	Standard value	Remarks
Motor speed adjustment	Connect the counter to LINE OUT and play back VTT-712 (3000 Hz) and adjust to the semi-fixed VR of mechanism relay P.C.B.	Normal speed semi-fixed VR	A: 3010 Hz B: 3000 Hz	* Adjust the tape speed so that mechanism A is faster than B.
		High speed semi-fixed VR	A: 6020 Hz B: 6000 Hz	* When the semi-fixed VR adjustment is not possible, use the semi-fixed VR in the motor.
Wow & Flutter check	Wow and flutter shall be less than 0.16% (WRMS) using VTT712.		0.16% (WRMS)	
Checking playback torque	Employ a torque testing cassette tape CTG-N for the checking, or remove the cassette cover and use a torque gauge.		40—70 gr-cm	If the standard torque is not obtained, replace the take-up disc assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		More than 80 gr-cm	If the standard torque is not obtained, perform the following. 1. Clean the capstan belt, the idler circumference, the motor pulley, the take-up reel disc circumference, the flywheel circumference, etc. 2. Replace the belt and idler.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		More than 80 gr-cm	If the standard torque is not obtained, clean the capstan belt, idler, motor pulley, flywheel circumference, rewinding idler circumference, left reel disc circumference, etc.
Adjusting record/playback head position  Forward Reverse	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the VMT702 test tape. 3. Adjust the head angle with the screw (A) or (B) until the reading of the electronic voltmeter becomes maximum for both directions. 4. After adjusting, set the screw with screw bond.	Screw (A) and (B)	Maximum	See Refer No. 12, 13 of page 13

Amplifier P.C. Board Top View

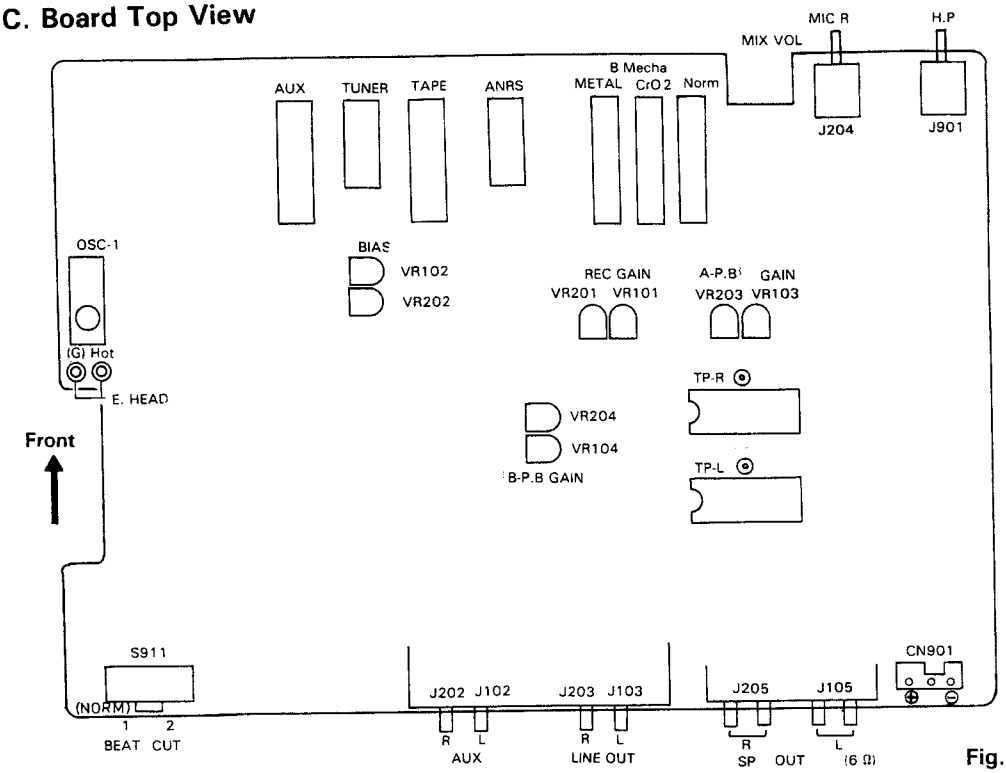
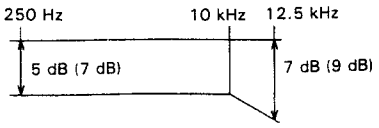


Fig. 23

Basic conditions

Power supply : DC 12V
Output measuring point : LINE OUT
Installation : Horizontal
(When not specified, this unit is set to LINE IN, ANRS OFF, MIC and VR MAX.)
(A ... Mechanism A, B ... Mechanism B)

	Item	Description
1.	PB level adjustment	Play back VTT724 (1 kHz) and adjust VR 103 and VR203 of mechanism A and VR104 and VR204 of mechanism B so that output level at TP-L and TP-R is −5.5 dBs. After adjustment, with tape switch selected to CrO_2, it shall be within 0 to −2 dB in mechanism B. Mechanism A shall be checked by variations of noise. (Adj. after check = −7±2 dB)
2.	PB frequency response check	Play back VTT739 and check that deviation in output level of 10 kHz to 1 kHz within +0.5±2 dB.
3.	LED indicator check	In REC/PB mode, check that LED indicator "0 dB" lights with TEST POINT of within −5.5 dBs ±2 dB. (At L, R separate or simultaneous input).
4.	OSC frequency adjustment	Adjust OSC 1 so that bias leak at LINE OUT is minimized while balancing L and R. In this case, check that OSC frequency at erase head post pin is measured within 66 kHz ±3 kHz.
5.	REC/PB frequency response adjustment (Mechanism B)	DOLBY OFF NORM: Record and play back 1.25 kHz and 12.5 kHz (reference level −20 dB) using MAXELL UD tape and adjust VR102 and 202 so that difference in output level is +1 to ±0.5 dB at TP-L and TP-R. CrO_2: Check after NORM adjustment that difference in output level is within 12.5 kHz ±2 dB. METAL and CrO_2: When ANRS is set to ON, response with each tape shall be within the following values. ( ) indicates at REV. 

	Item	Description
6.	REC/PB sensitivity adjustment	Using MAXELL UD tape, record 1 kHz (reference level −20 dB) setting to LINE IN and NR OFF and adjust VR101 and VR201 so that playback output is at the same values at the recording at TP-L and TP-R.
7.	Bias leak	After each adjustment, bias leak shall be as follows in any mode. LINE OUT ..... less than −38 dBs LED indicator ..... not lit TP-L, TP-R (ANRS) ..... less than −45 dBs
8.	ANRS check	To cut bias current In REC mode, adjust INPUT level control so that output level at TP-L and TP-R is −2.5 dB with input of 1 kHz. In addition, turn down input level by 40 dB with ATT, and output level at TP shall be +5.7 ±2 dB with ANRS OFF →ON. Turn up input level by 20 dB with ATT changing input from 1 kHz to 5 kHz, and output level at TP shall be +3.5 dB ±2 dB with ANRS OFF → ON.
9.	REC MUTE check	Perform recording at an arbitary reference input level with REC MUTE SW kept ON, check that no input signal is recorded when playing it back. Also check that no appreciable noise occures when switching the REC MUTE button.
10.	MIC dummy check	In REC mode, check that no oscillation occurs with 10 kohm microphone dummy.
11.	Mixing check	Check that mixing level is adjusted by microphone VR. With mike connected ....
12.	Deck A/B azimuth difference check	Mechanism B: Record 10 kHz (reference level −20 dB) and make azimuth tape. The azimuth difference in mechanism A shall be within −4 dB.
13.	Deck A/B playback level difference check	Mechansim B: Record 1 kHz (reference level −20 dB) and the difference in playback level between mechanism B and A shall be within 3 dB.

Tuner Section

Parts Arrangement for Alignment

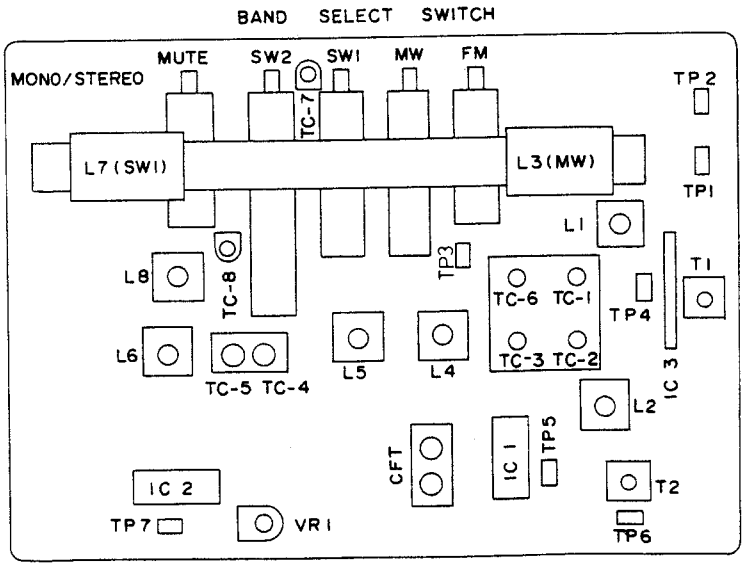
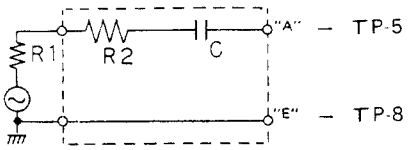


Fig. 24

Dummy Antenna



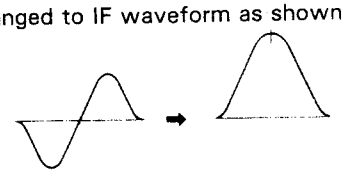
R1 + R2 = 80 Ω
C = 10 pF
R1: Output impedance of S.S.G.

Fig. 25

Tuner Alignment

BASIC CONDITIONS

POWER SOURCE OF THE RECEIVER	DC 12 V, AC240/220/110 V, 50/60 Hz
LOAD RESISTANCE OF THE RECEIVER	50 mW (0.55 V)/6 Ω
MODULATION OF SSG	400 Hz. 30%

Item	Description
1. AM IF ALIGNMENT	
1-1 Conditions of the receiver.	
(1) Power source:	DC 12 V (When the power is supplied directly to the tuner in the receiver, the voltage should be adjusted to the proper level which shall be required by the tuner.)
(2) Function switch position:	RADIO
(3) Band select switch:	MW
(4) Volume control:	Minimum gain position
(5) Tone control:	Center (Bass, Treble) position
(6) Variable capacitor:	Near the minimum capacity position where no signal come in.
1-2 Connection of Sweeper and the receiver	
(1) Tuner input:	Positive side to TP3
(2) Tuner output:	Positive side to TP5 Negative side to TP6]
1-3 Aligning position:	CFT
1-4 Alignment (Waveform):	Adjust AM I.F.T. (above mentioned aligning position) so that maximum and symmetrical wave form can be obtained. In this case, the wavehead should be appeared at the center marker (455 kHz) on the scope of Sweeper.
2. FM IF ALIGNMENT	
2-1 Conditions of the receiver	
(1) Power source:	Same as mentioned in item 1-1
(2) Function switch position:	RADIO
(3) Band select switch:	FM
(4) Volume control:	Minimum gain position
(5) Tone control:	Center (Bass, Treble) position
(6) Variable capacitor:	Near the minimum capacity position where no signal come in.
2-2 Connection of Sweeper and the receiver	
(1) Tuner input:	Positive side to TP4
(2) Tuner output:	Positive side to TP5 Negative side to TP6
NOTE a) Attach a capacitor (30 pF) and a resistor (30 kΩ) to the positive side cable which shall be led from Sweeper input. b) Attach a resistor (100 kΩ) in series to the positive side cable which shall be led from Sweeper output.	
2-3 Aligning position:	a) IF Waveform: T1 b) Discriminate Waveform: T2 ("S" curve waveform)
2-4 Alignment (Waveform):	Adjust the discriminate coil (T2) so that "S" curve waveform may be changed to IF waveform as shown in following figure.  After above, adjust T1 so that max. sensitivity and symmetrical IF waveform can be obtained on the scope of Sweeper. Adjust the discriminate T2 again so that above symmetrical IF waveform may be changed to balanced "S" curve waveform.

Discriminate Waveform:

Note

Coller of Celamic Filter	IF Frequency
Blue	10.67 MHz
Red	10.7 MHz
Orenge	10.73 MHz

Item	Description
3. AM RF ALIGNMENT	
3-1 Conditions of the receiver.	
(1) Power source:	Same as mentioned in item 1-1.
(2) Function switch position:	RADIO
(3) Volume control:	50 mW
(4) Tone control:	Center (Bass, Treble) position
(5) Variable capacitor:	Refer the following list shown in item 3-4.
3-2 Conditions of SSG.	
(1) Modulation:	Refer the basic condition
(2) Frequency:	Refer the following list shown in item 3-4.
(3) Output level of the attenuator in SSG:	Approx. 50 mW
3-3 Power output measuring position:	Speaker terminals
3-4 Alignment:	

	Band Select Switch Position	Sort of Antenna to be attached to SSG	Frequency of SSG	Variable Capacitor Position	Aligning Position
1	MW	Loop Antenna	520 kHz	Max. capacity	L4
2			1,650 kHz	Min. capacity	TC-3
3			Ajust the above aligning position (L4 & TC-3) repeatedly so that the tuner can be received above frequency range (band width).		
4			620 kHz	to be received 620 kHz	L3
5			1,400 kHz	to be received 1,400 kHz	TC-6
6			Adjust the above aligning position (L3 & TC-6) repeatedly so that the tuner can be obtained the best sensitivity.		
7	LW	Loop Antenna	145 kHz	Max. capacity	L5
8			360 kHz	Min. capacity	TC-4
9			Adjust the above aligning position (L5 & TC-4) repeatedly so that the tuner can be received above frequency range (band width)		
10			160 kHz	to be received 160 kHz	L7
11			350 kHz	to be received 350 kHz	TC-7
12			Adjust the above aligning position (L7 & TC-7) repeatedly so that the tuner can be obtained the best sensitivity.		
13	SW	Dummy Antenna	5.8 MHz	Max. capacity	L6
14			18.6 MHz	Min. capacity	TC-5
15			Adjust the above aligning position (L6 & TC-5) repeatedly so that the tuner can be received above frequency range (band width).		
16			6.0 MHz	to be received 6.0 MHz	L8
17			18.0 MHz	to be received 18.0 MHz	TC-8
18			Adjust the above aligning position (L8 & TC-8) repeatedly so that the tuner can be obtained the best sensitivity.		

Item	Description
4. FM RF ALIGNMENT 4-1 Conditions of the receiver. (1) Power source: (2) Function switch position: (3) Band select switch: (4) Volume control: (5) Tone control: (6) Variable capacitor: 4-2 Condition of FM SSG. (1) Modulation: (2) Frequency: (3) Output level of the attenuator in FM SSG: 4-3 Alignment:	 Same as mentioned in item 1-1. RADIO FM 50 mW Center (Bass, Treble) position Refer the following list shown in item 4-3. Refer the basic condition Refer the following list shown in item 4-3. The level shall be decided by the load resistance of the receiver mentioned in the basic conditions.

	Band Select Switch Position	Sort of Antenna to be attached to SSG	Frequency of SSG	Variable Capacitor Position	Aligning Position
1	FM	Dummy Antenna	87.5 MHz	Max. capacity	L2
2			109.0 MHz PC-W330L/LB 108.3 MHz PC-W330LD	Min. capacity	TC-2
3			Ajust the above aligning position (L2 & TC-2) repeatedly so that the tuner can be received above frequency range (band width).		
4			90 MHz	to be received 90 MHz	L1
5			106 MHz	to be received 106 MHz	TC-1
6			Adjust the above aligning position (L1 & TC-1) repeatedly so that the tuner can be obtained the best sensitivity.		

FM MPX Alignment

A. 19 kHz Alignment (Regular Method)
1. Connect a frequency counter to the test point TP7 (earth = TP6).
2. Supply the monaural signal (98 MHz, 60 dB) across the test points TP1 and TP2.
3. Adjust the variable resistor VR1 so that the frequency becomes 19 kHz ± 100 Hz.

B. 19 kHz Alignment (Simplified Method)
1. Tune to an FM stereo broadcast.
2. Set the variable resistor VR1 to the ST indicator ON.

How to Engage Dial Cord

1. Turn the dial drum fully clockwise (to the highest frequency).
2. Use kevlar cord (1110 mm long and 0.5 mm in diameter).
3. Install the string in the sequence of the numbers.

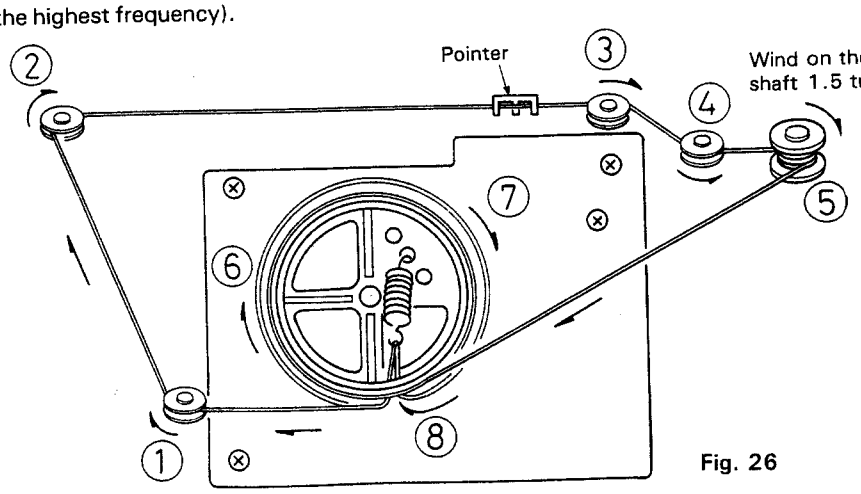


Fig. 26

Block Diagram

Tuner System

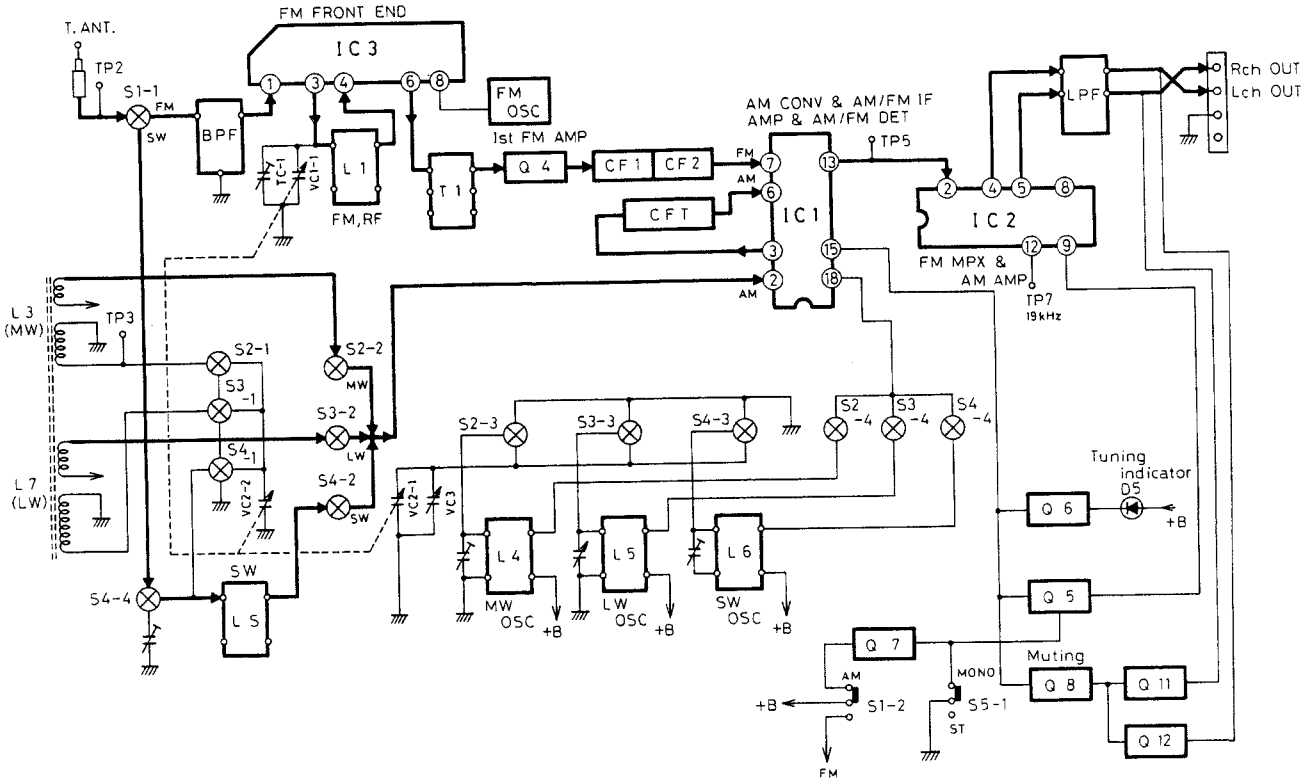


Fig. 27

Playback System

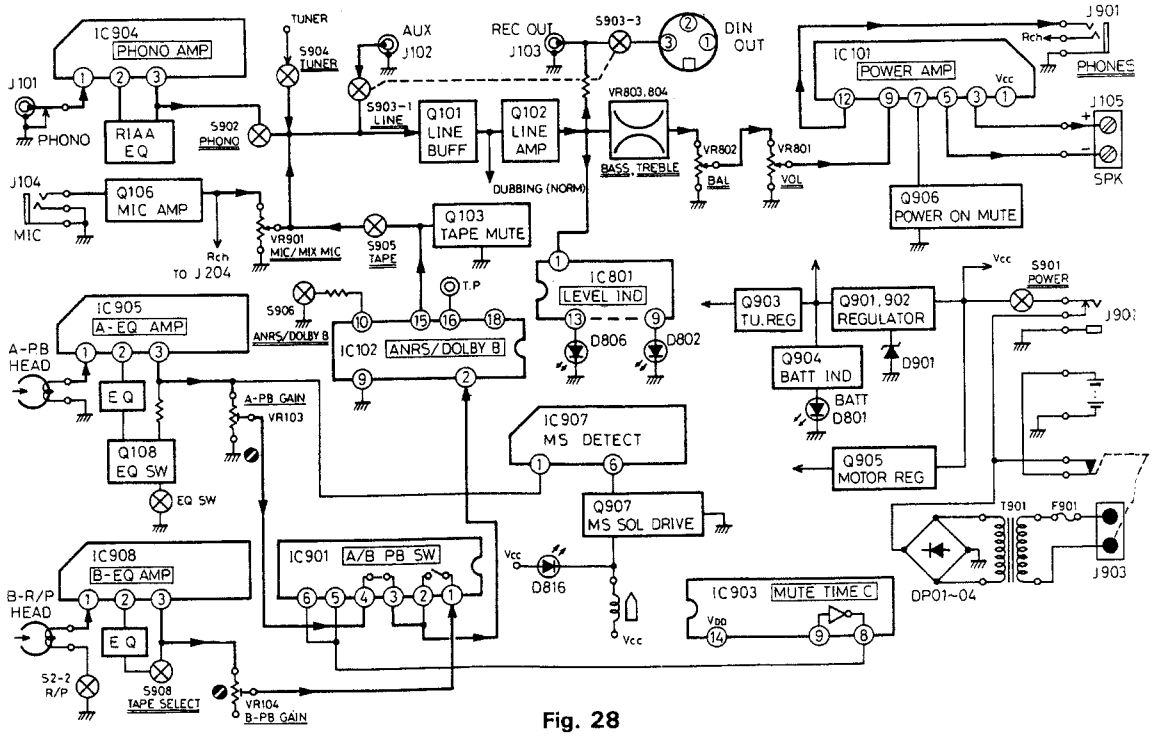


Fig. 28

Recording System

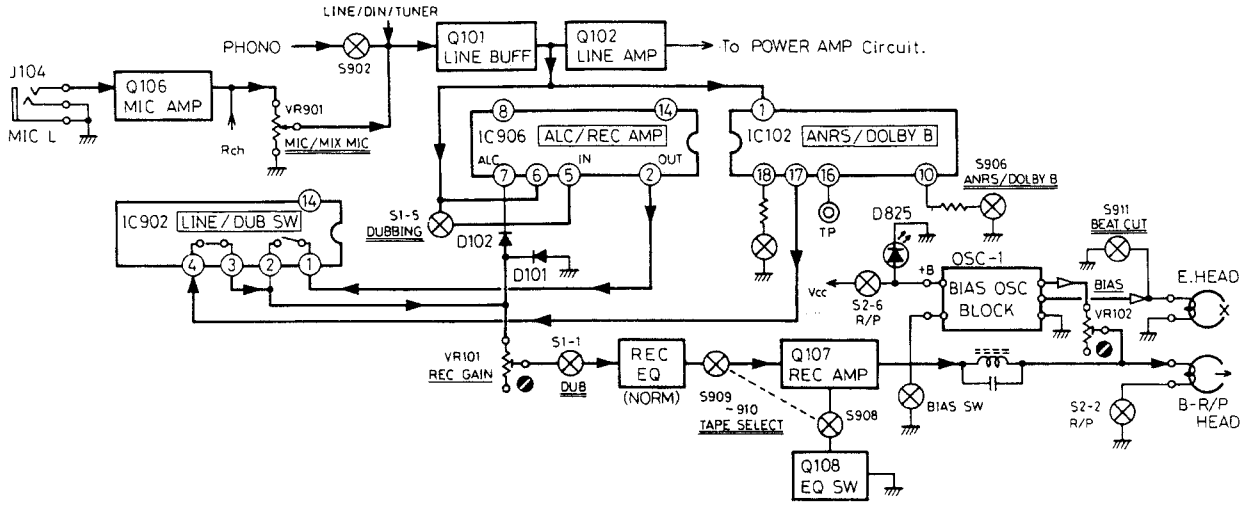


Fig. 29

Dubbing System

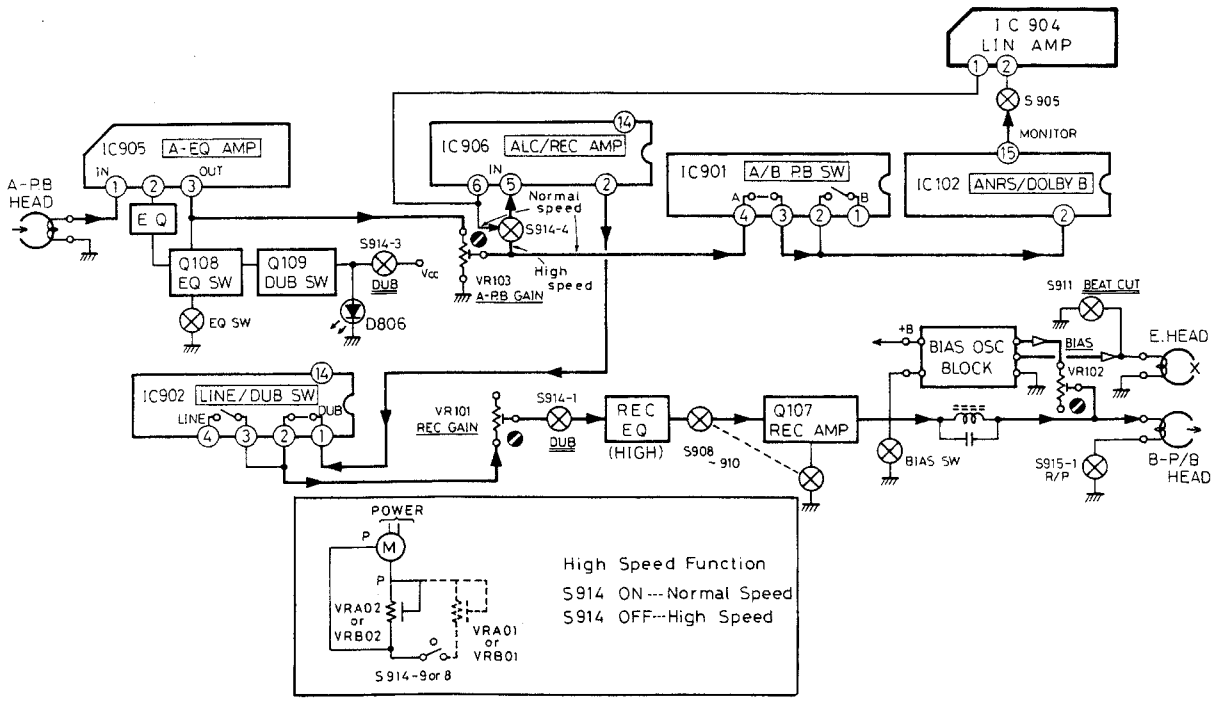
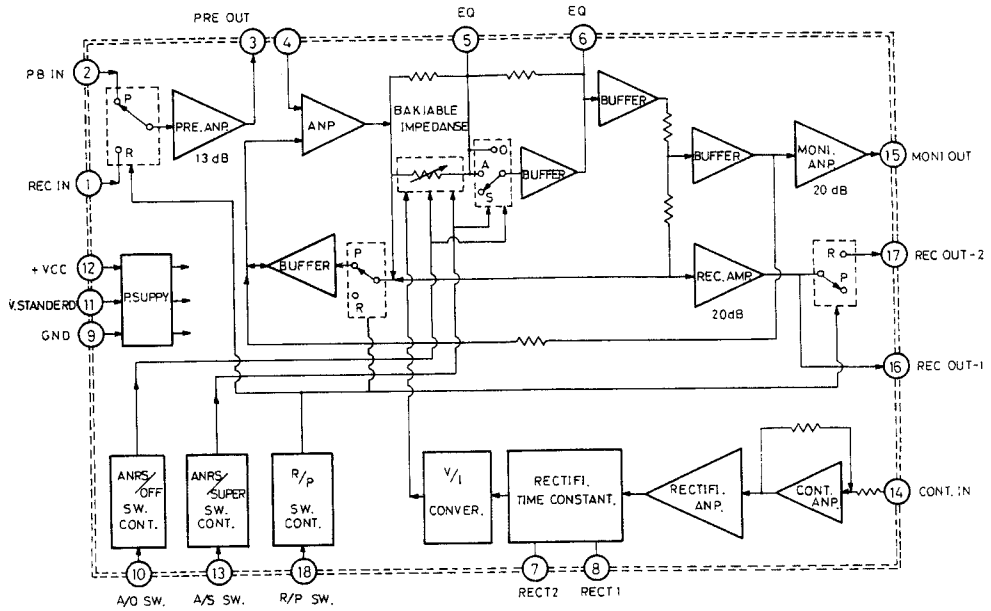


Fig. 30

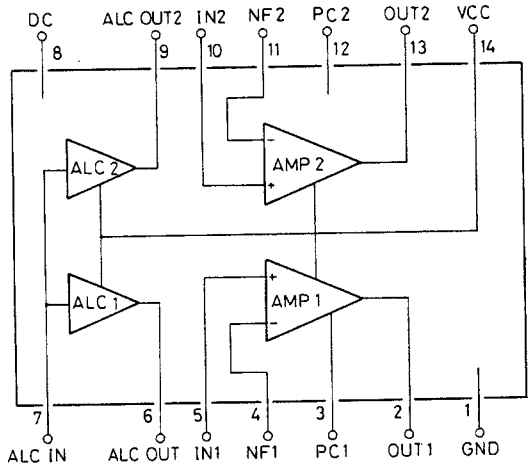
Integrated Circuit

Amplifier Section

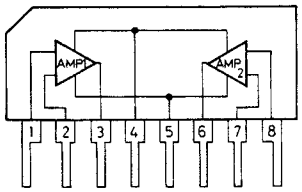
AN7363N



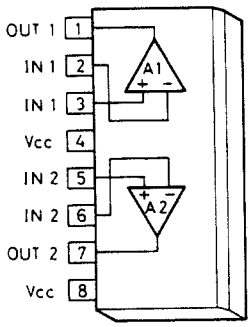
LA3220



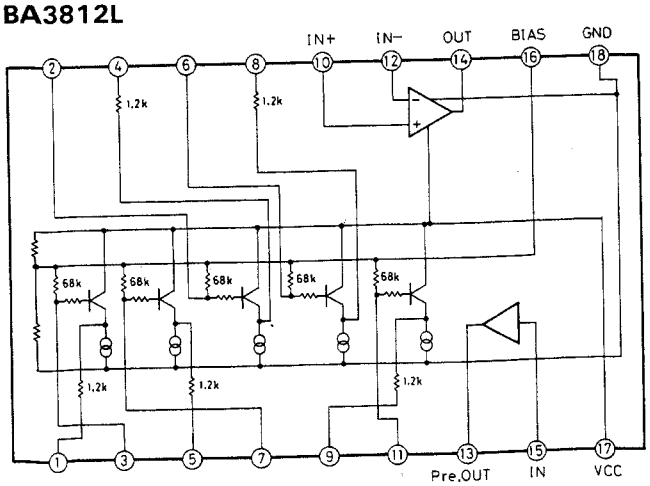
UPC1228H



M5218L



BA3812L



AN7161N

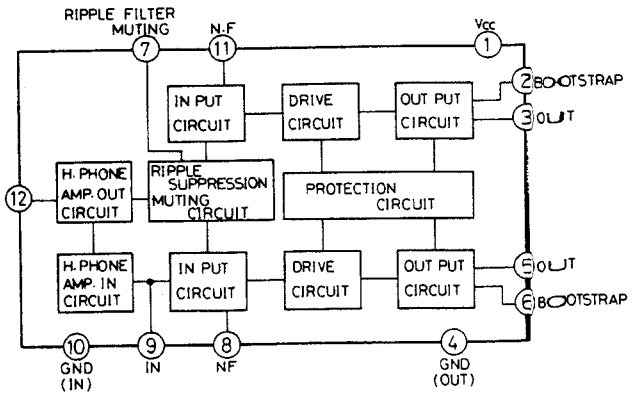
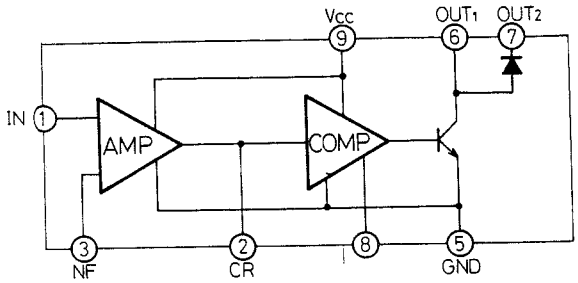
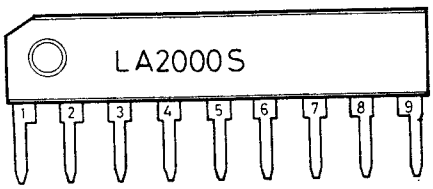


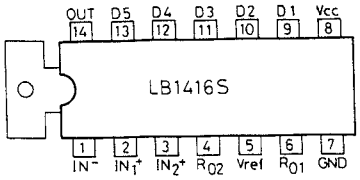
Fig. 31

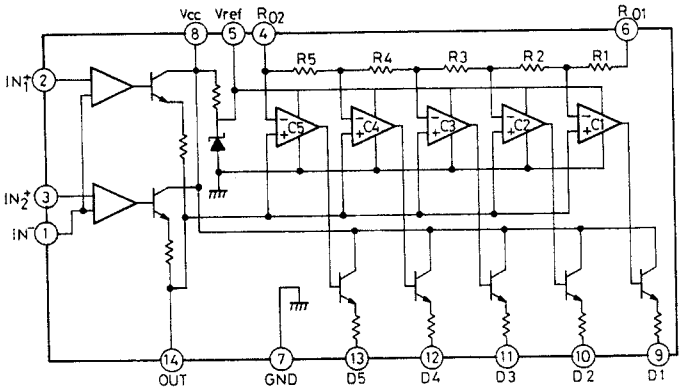
LA2000S





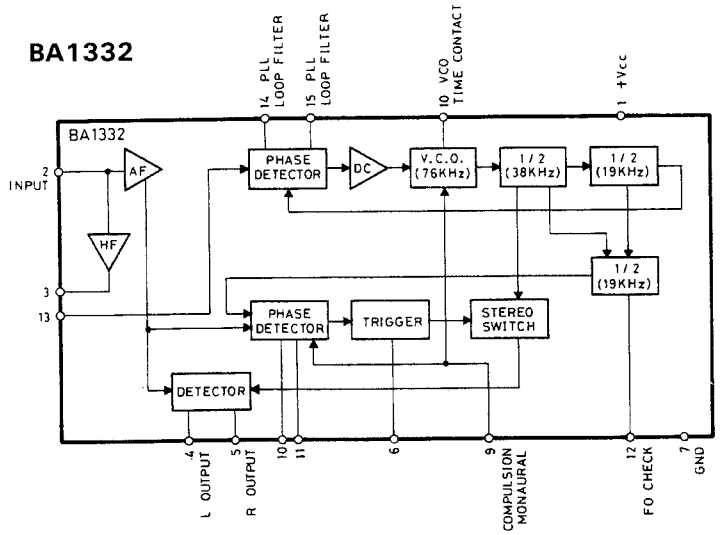
LB1416S



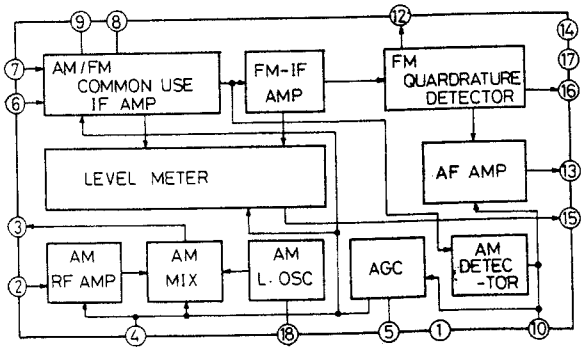


Tuner Section

BA1332



AN7222N



TA7358

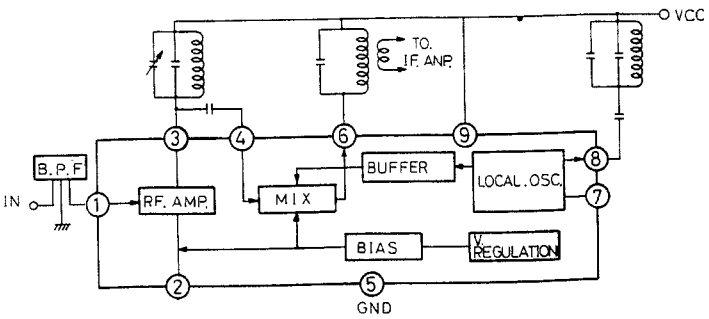
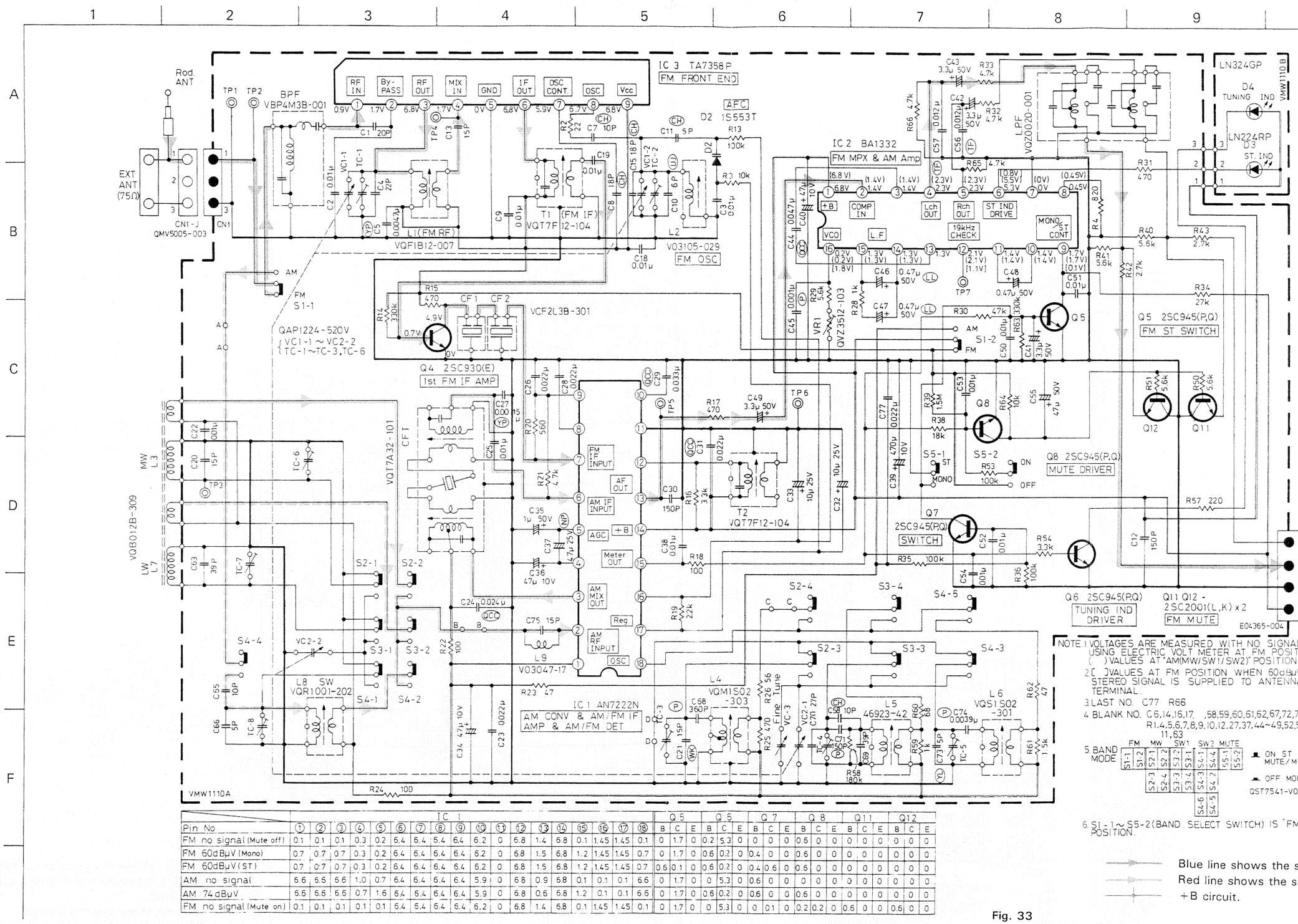


Fig. 32

Standard Schematic Diagram of PC-W330 L/LB/LD (Tuner Circuit)



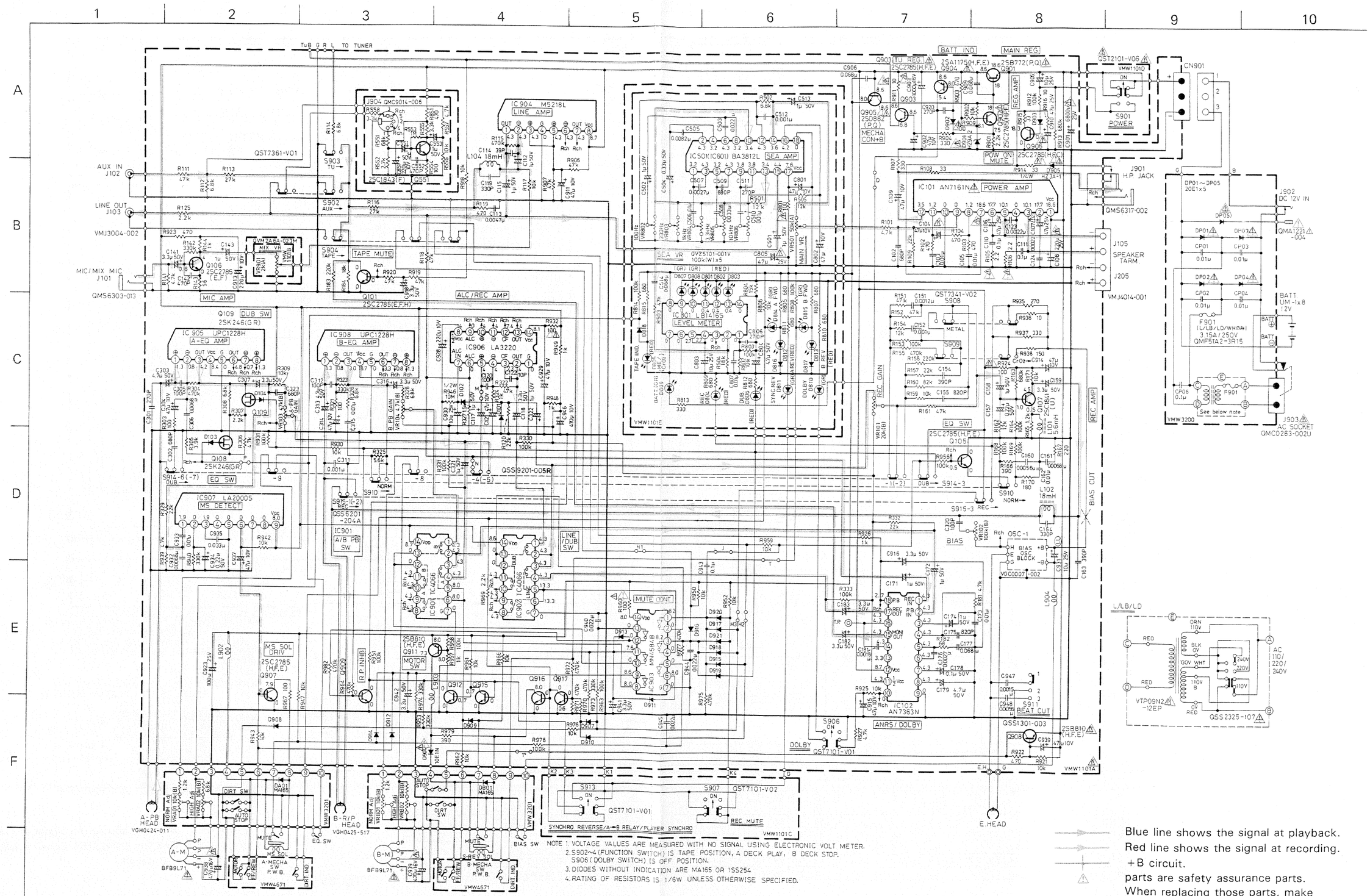
Pin No	IC 1 ①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	Q5 B	C	E	Q6 B	C	E	Q7 B	C	E	Q8 B	C	E	Q11 B	C	E	Q12 B	C	E
FM no signal (Mute off)	0.1	0.1	0.1	0.3	0.2	6.4	6.4	5.4	6.4	6.2	0	6.8	1.4	6.8	0.1	1.45	1.45	0.1	0	1.7	0	0.2	5.3	0	0	0	0	0.6	0	0	0	0	0	0	0	0
FM 60dBμV (Mono)	0.7	0.7	0.7	0.3	0.2	6.4	6.4	6.4	6.4	6.2	0	6.8	1.5	6.8	1.2	1.45	1.45	0.7	0	1.7	0	0.6	0.2	0	0.4	0	0	0.6	0	0	0	0	0	0	0	0
FM 60dBμV (ST)	0.7	0.7	0.7	0.3	0.2	6.4	6.4	6.4	6.4	6.2	0	6.8	1.5	6.8	1.2	1.45	1.45	0.7	0.6	0.1	0	0.6	0.2	0	0.4	0.6	0	0.6	0	0	0	0	0	0	0	0
AM no signal	6.6	6.6	6.6	1.0	0.7	6.4	6.4	6.4	6.4	5.9	0	6.8	0.9	6.8	0.1	0.1	0.1	6.6	0	1.7	0	0	5.3	0	0.6	0	0	0	0	0	0	0	0	0	0	0
AM 74dBμV	6.6	6.6	6.6	0.7	1.6	6.4	6.4	6.4	6.4	5.9	0	6.8	0.6	6.8	1.2	0.1	0.1	6.6	0	1.7	0	0.6	0.2	0	0.6	0	0	0.6	0	0	0	0	0	0	0	0
FM no signal (Mute on)	0.1	0.1	0.1	0.1	0.1	6.4	6.4	6.4	6.4	6.2	0	6.8	1.4	6.8	0.1	1.45	1.45	0.1	0	1.7	0	0	5.3	0	0	0.1	0	0.2	0.2	0	0.6	0	0	0.6	0	0

NOTE 1 VOLTAGES ARE MEASURED WITH NO SIGNAL USING ELECTRIC VOLT METER AT FM POSITION. ( ) VALUES AT "AM(MW/SW1/SW2)" POSITION.
2 [ ] VALUES AT FM POSITION WHEN 60dBμV STEREO SIGNAL IS SUPPLIED TO ANTENNA TERMINAL.
3 LAST NO. C77 R66
4 BLANK NO. C6,14,16,17, ,58,59,60,61,62,67,72,76 R1,4,5,6,7,8,9,10,12,27,37,44~49,52,55,56 11,63
5 BAND MODE: FM (S1-1, S1-2) MW (S2-1, S2-2, S2-3, S2-4) SW1 (S3-1, S3-2, S3-3, S3-4) SW2 (S4-1, S4-2, S4-3, S4-4, S4-5, S4-6) MUTE (S5-1, S5-2) — ON: ST MUTE/MODE; OFF: MONO — QST7541-V02
6 S1-1 ~ S5-2 (BAND SELECT SWITCH) IS "FM" POSITION.

Blue line shows the signal at FM.
Red line shows the signal at AM.
+B circuit.

Fig. 33

Standard Schematic Diagram of PC-W330 L/LB/LD (Amplifier Circuit)



Blue line shows the signal at playback.
Red line shows the signal at recording.
+B circuit.
parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Fig. 34

Wiring Connections

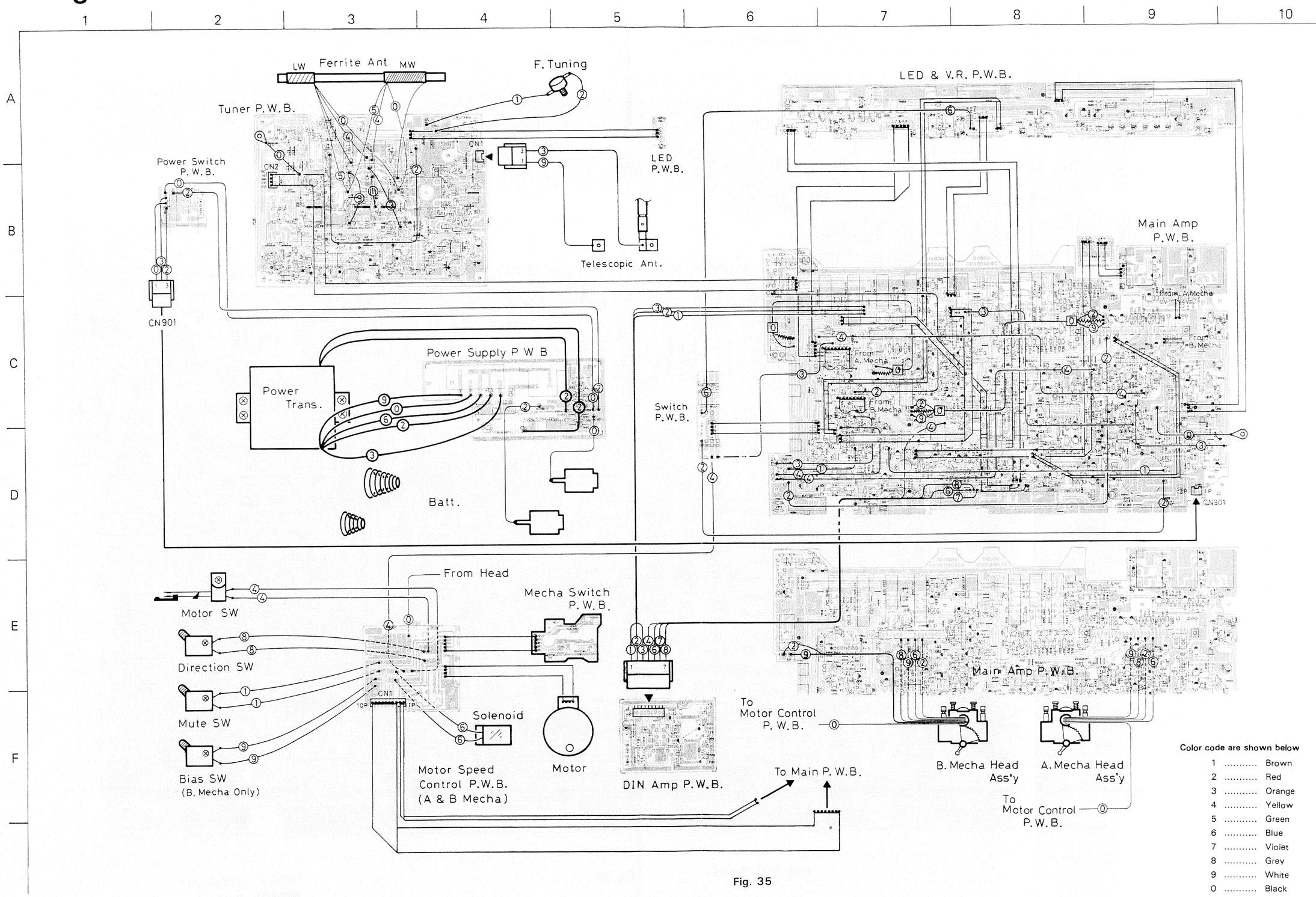


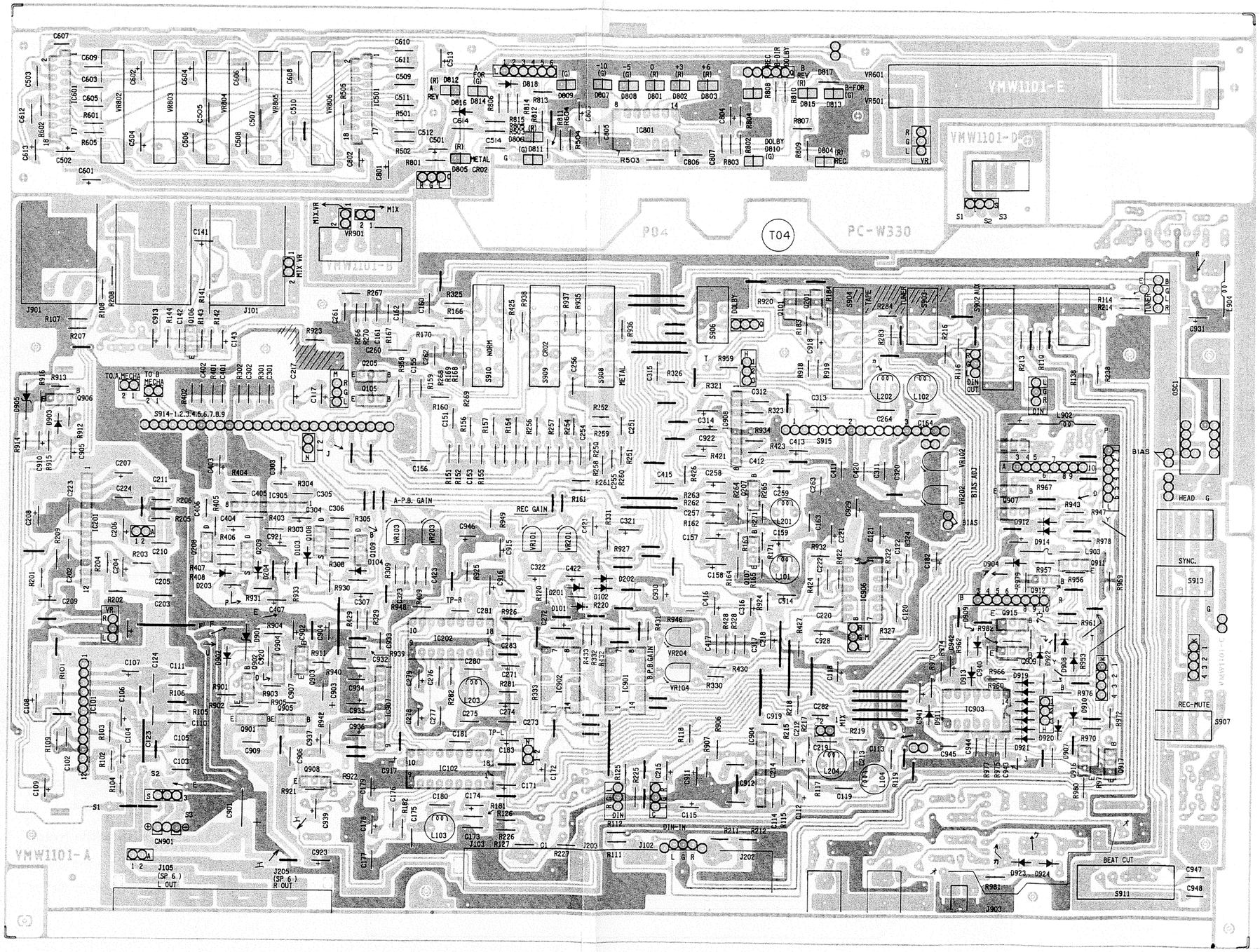
Fig. 35

Color code are shown below

1	.....	Brown
2	.....	Red
3	.....	Orange
4	.....	Yellow
5	.....	Green
6	.....	Blue
7	.....	Violet
8	.....	Grey
9	.....	White
0	.....	Black

P.C. Board Parts (Amplifier P.C. Board)

SEA/LED/VOLUME P.C. Board



Main P.C. Board

Fig. 36

+B circuit
Earth
IC & Transistor

Amplifier P.C. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
⚠	IC101,IC201	AN7161N	I.C.		2
	IC102,IC202	AN7363N	I.C.		2
	IC501,IC601	BA3812L	I.C.		2
	IC907	LA2000S	I.C.		1
	IC906	LA3220	I.C. (M)		1
	IC801	LB1416S	I.C.		1
	IC901,IC902	MN4066B	I.C.		2
	IC904	M5218L	I.C.		1
	IC901,IC902	TC4066BP	I.C.		2
	IC903	TC4584BP	I.C.		1
	IC905,IC908	UPC1228H	I.C.		2
	IC903	UPD4584BC	I.C.		1
	Q904	2SA1175(H,F,E)	TRANSISTOR		1
⚠	Q901	2SB772(Q,P)	TRANSISTOR		1
⚠	Q908 ,Q911	2SB810(E,F,H)	TRANSISTOR		2
	Q107 ,Q207	2SC1841(U)	TRANSISTOR		2
	Q106	2SC2785(E,F)	TRANSISTOR		1
⚠	Q101 ,Q105	2SC2785(HFE)	TRANSISTOR		13
	Q201 ,Q205				
⚠	Q902 ,Q903				
	Q906 ,Q907				
	Q909 ,Q912				
	Q915 -Q917				
⚠	Q905	2SD882(Q,P)	TRANSISTOR		1
	Q108 ,Q109	2SK246(GR)	FET		4
	Q208 ,Q209				
⚠	D905	HZ3A1	ZENER DIODE		1
⚠	D901	HZ9A2	ZENER DIODE		1
	D101 -D104	MA165	SI.DIODE		28
	D201 -D204				
	D816 -D818				
	D902 ,D903				
	D907 -D921				
	D807 -D811	SLB-26GG5F	L.E.D.		5
	D801 -D806	SLB-26UR5F	L.E.D.		6
	D814 ,D815	SLT-35GG5F	L.E.D.		2
	D812 ,D813	SLT-35UR5F	L.E.D.		2
⚠	D900 ,D904	10E1N-F	S DIODE		2
	VR901	QVM2A6A-023M	V.RESISTOR		1
	VR101,VR201	QVZ1802-223	V RESISTOR		2
	VR103,VR104	QVZ1802-472	V RESISTOR		4
	VR203,VR204				
	VR102,VR202	QVZ3512-104	V.RESISTOR		2
	VR802-VR806	QVZ5101-002V	V RESISTOR		5
	VR501,VR601	QVZ6106-002	V.RESISTOR		1
	CN901	QMV5005-003	PLUG		1
	S911	QSS1301-003	SLIDE SWITCH		1
	S2	QSS6201-204A	SLIDE SWITCH		1
	S1	QSS9201-005R	SLIDE SWITCH		1
⚠	S901	QST2101-V06	PUSH SWITCH		1
	S906 ,S913	QST7101-V05	PUSH SWITCH		2
	S907	QST7101-V06	PUSH SWITCH		1
	S908 ,S910	QST7341-V04	PUSH SWITCH		1
	S902 -S904	QST7361-V04	PUSH SWITCH		1
	L902 -L904	T41572-001	CHOKE COIL		3

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	L901	VGC0007-002	OSC BLOCK		1
	L102 ,L202	VQP0001-183S	INDUCTOR		2
	L101 ,L201	VQP0001-562S	INDUCTOR		2
	L104 ,L204	VQP0006-183	INDUCTOR		2
	R946	QRD121J-106	C RESISTOR		1
⚠	R914	QRD141J-330	CARBON RESISTOR		1
⚠	R911 ,R916	QRD161J-100	CARBON RESISTOR		3
	R936				
⚠	R303 ,R321	QRD161J-101	CARBON RESISTOR		10
	R403 ,R421				
⚠	R801 ,R909				
	R924 ,R932				
⚠	R960 ,R967				
	R144 ,R324	QRD161J-102	CARBON RESISTOR		7
	R424 ,R926				
	R948 ,R949				
	R957				
	R117 ,R159	QRD161J-103	CARBON RESISTOR		25
	R171 ,R217				
	R259 ,R271				
	R309 ,R409				
	R802 ,R806				
	R902 ,R918				
	R921 ,R925				
	R930 ,R942				
	R943 ,R947				
	R950 ,R952				
	R959 ,R961				
	R962 ,R966				
	R976				
	R153 ,R164	QRD161J-104	CARBON RESISTOR		24
	R168 ,R169				
	R253 ,R264				
	R268 ,R269				
	R330 ,R331				
	R333 ,R430				
	R431 ,R433				
	R803 ,R808				
	R814 ,R912				
	R931 ,R951				
	R956 ,R958				
	R963 ,R978				
	R165 ,R265	QRD161J-122	CARBON RESISTOR		2
	R154 ,R162	QRD161J-123	CARBON RESISTOR		8
	R254 ,R262				
	R501 ,R505				
	R601 ,R605				
	R938	QRD161J-151	CARBON RESISTOR		1
	R327 ,R427	QRD161J-152	CARBON RESISTOR		2
	R804	QRD161J-153	CARBON RESISTOR		1
	R170 ,R270	QRD161J-181	CARBON RESISTOR		2
	R184 ,R284	QRD161J-183	CARBON RESISTOR		4
	R504 ,R604				
⚠	R105 ,R106	QRD161J-2R2	C RESISTOR		4
	R205 ,R206				

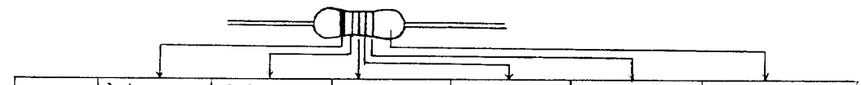
⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	R167 ,R267	QRD161J-221	CARBON RESISTOR		2
	R125 ,R225	QRD161J-222	CARBON RESISTOR		6
	R307 ,R407				
	R901 ,R969				
	R109 ,R120	QRD161J-223	CARBON RESISTOR		10
	R157 ,R209				
	R220 ,R257				
	R329 ,R332				
	R429 ,R432				
	R158 ,R183	QRD161J-224	CARBON RESISTOR		4
	R258 ,R283				
	R935	QRD161J-271	CARBON RESISTOR		1
	R113 ,R116	QRD161J-273	CARBON RESISTOR		4
	R213 ,R216				
	R108 ,R208	QRD161J-330	CARBON RESISTOR		3
	R915				
	R107 ,R207	QRD161J-331	CARBON RESISTOR		5
	R813 ,R904				
	R937				
	R142 ,R323	QRD161J-334	CARBON RESISTOR		7
	R423 ,R940				
	R953 ,R973				
	R974				
	R166 ,R266	QRD161J-391	CARBON RESISTOR		3
	R979				
	R305 ,R405	QRD161J-392	CARBON RESISTOR		2
	R102 -R104	QRD161J-471	CARBON RESISTOR		9
	R202 -R204				
	R903 ,R922				
	R923				
	R101 ,R141	QRD161J-472	CARBON RESISTOR		9
	R181 ,R201				
	R281 ,R306				
	R406 ,R927				
	R939				
	R111 ,R118	QRD161J-473	CARBON RESISTOR		18
	R151 ,R152				
	R161 ,R211				
	R218 ,R251				
	R252 ,R261				
	R322 ,R422				
	R503 ,R603				
	R906 ,R907				
	R919 ,R920				
	R115 ,R155	QRD161J-474	CARBON RESISTOR		13
	R215 ,R255				
	R304 ,R404				
	R964 ,R970				
	R971 ,R972				
	R975 ,R977				
	R982				
	R143	QRD161J-560	CARBON RESISTOR		1
	R119 ,R219	QRD161J-561	CARBON RESISTOR		2
	R325 ,R425	QRD161J-562	CARBON RESISTOR		2
	R182 ,R282	QRD161J-680	CARBON RESISTOR		2

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	R805 ,R807 R809 -R812 R815	QRD161J-681	CARBON RESISTOR		7
	R112 ,R114 R212 ,R214	QRD161J-682	CARBON RESISTOR		12
	R308 ,R326 R328 ,R408 R426 ,R428 R502 ,R602 R163 ,R263	QRD161J-684	CARBON RESISTOR		3
	R913	QRD161J-823	CARBON RESISTOR		2
	R160 ,R260 C103 ,C105 C173 ,C203 C205 ,C273	QCC11EM-103	C.CAPACITOR		10
	C510 ,C610 C807 ,C933 C177 ,C277 C514 ,C614 C906 ,C909	QCC11EM-683	C.CAPACITOR		6
	C503 ,C603 C940 ,C944 C945	QCF11HP-223	C.CAPACITOR		5
	C122 ,C222	QCS11HJ-100	C.CAPACITOR		2
	C120 ,C220	QCS11HJ-101	C.CAPACITOR		8
	C305 ,C312 C320 ,C405 C412 ,C420 C301 ,C401 C511 ,C611	QCS11HJ-271	C.CAPACITOR		6
	C806 ,C920 C119 ,C164 C219 ,C264	QCS11HJ-331	C.CAPACITOR		4
	C114 ,C214	QCS11HJ-390	C.CAPACITOR		2
	C154 ,C163	QCS11HJ-391	C.CAPACITOR		4
	C254 ,C263	QCS11HJ-471	C.CAPACITOR		1
	C142	QCS11HJ-821	C.CAPACITOR		2
	C155 ,C255 C152 ,C252 C311 ,C411	QCY41HK-102	C.CAPACITOR		6
	C512 ,C612	QCY41HK-122	C.CAPACITOR		2
	C151 ,C251	QCY41HK-152	C.CAPACITOR		1
	C947	QCY41HK-182	C.CAPACITOR		2
	C181 ,C281 C176 ,C276	QCY41HK-272	C.CAPACITOR		4
	C507 ,C607 C160 ,C260 C948	QCY41HK-562	C.CAPACITOR		3
⚠	C102 ,C202 C302 ,C323	QCY41HK-681	C.CAPACITOR		8
	C402 ,C423 C509 ,C609				
	C932	QCY41HK-682	C.CAPACITOR		1
	C175 ,C275	QCY41HK-821	C.CAPACITOR		2
	C931	QEB41EM-106	LLC E CAPACITOR		1

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	C178 ,C278	QEB41HM-104	LLC E CAPACITOR		2
	C157 ,C257	QEB41HM-224	LLC E CAPACITOR		3
	C934				
	C504 ,C604	QEB41HM-334	LLC E CAPACITOR		2
	C905	QEH51HM-106	E CAPACITOR		1
⚠	C104 ,C106	QEH61EM-476ZN	E CAPACITOR		6
	C107 ,C206				
	C207				
⚠	C901	QEL71EM-688M	E CAPACITOR		1
	C946	QET41AM-477	E.CAPACITOR		1
	C913 ,C928	QET41AR-227	E CAPACITOR		2
	C109 ,C121	QET41AR-476	E CAPACITOR		16
	C209 ,C221				
	C304 ,C314				
	C404 ,C414				
	C802 ,C902				
	C911 ,C914				
	C915 ,C929				
	C937 ,C939				
⚠	C903	QET41CR-108	E CAPACITOR		1
	C801	QET41CR-476	E CAPACITOR		1
⚠	C108 ,C208	QET41EM-227	E CAPACITOR		2
	C803 ,C930	QET41ER-106	E.CAPACITOR		2
	C923	QET41ER-107	E CAPACITOR		1
⚠	C805 ,C910	QET41ER-476	E CAPACITOR		2
	C112 ,C115	QET41HR-105	E.CAPACITOR		25
	C117 ,C143				
	C158 ,C171				
	C172 ,C174				
	C212 ,C215				
	C217 ,C258				
	C271 ,C272				
	C274 ,C321				
	C322 ,C421				
	C422 ,C501				
	C502 ,C513				
	C601 ,C602				
	C613				
	C118 ,C141	QET41HR-335	E.CAPACITOR		17
	C159 ,C182				
	C183 ,C218				
	C259 ,C282				
	C283 ,C307				
	C316 ,C407				
	C416 ,C916				
	C918 ,C941				
	C942				
	C179 ,C279	QET41HR-475	E.CAPACITOR		7
	C303 ,C313				
	C403 ,C413				
	C804				
	C113 ,C213	QFN41HJ-472	M CAPACITOR		2
	C161 ,C261	QFN41HJ-682	M.CAPACITOR		4
	C306 ,C406				
	C505 ,C605	QFN41HJ-822	M.CAPACITOR		2

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	C162 ,C262	QFV41HJ-103	TF.CAPACITOR		4
	C315 ,C415				
	C110 ,C111	QFV41HJ-104	TF CAPACITOR		7
	C210 ,C211				
	C506 ,C606				
	C943				
	C508 ,C608	QFV41HJ-333	TF CAPACITOR		3
	C935				
	J101	QMS6303-013	JACK		1
	J901	QMS6317-002	HEADPHON JACK		1
	J102 ,J103	VMJ3004-002	JACK		1
	J202 ,J203				
	J105 ,J205	VMJ4014-001	SPK.TERMINAL		1
	B000	QWY124-013	BUS WIRE		97

Axial Type Ceramic Capacitor



Color code.	1st. Color line. Figure.	2nd. Color line. Figure.	3rd. Color line. Multiplier.	4th. Color line. Allowance.	5th. Color line. Temp. Chara.		Color body.
Black	0	0	$X10^0$	± 20%(M)	CH		
Brown	1	1	$X10^1$			Y(V)	Light green DC. 50V 1H.
Red	2	2	$X10^2$				
Orange	3	3	$X10^3$				
Yellow	4	4	$X10^4$		RH		
Green	5	5	$X10^5$				
Blue	6	6	$X10^6$				
Violet	7	7			UJ		Pink DC. 16V 1C
Gray	8	8		30%(N)		X	
White	9	9			SL		
Gold			$X10^{-1}$	± 5%(J)			
Silver			$X10^{-2}$	± 10%(K)		B	

Parts Number.

Taping parts.

Temp. Character.	Ceramic capacitor.								DC. Voltage	Allowance.
SL	Q	C	S	B	1	H	J,M,K	-□□□ Y	1H(50V)	1-1.8pF : M, 2.2-8.2pF : K 10-68pF : J only.
B	Q	C	B	B	1	H	K	-□□□ Y	"	K only
X	Q	C	X	B	1	C	M	-□□□ Y	1C(16V)	M only
Y	Q	C	V	B	1	C	M,N	-□□□ Y	"	M & N only.
F	Q	C	F	B	1	E	Z	-□□□ Y	1E(25V)	Z only
CH,RH,UJ	Q	C	T	3	0	CH,RH,UJ		-□□□ Y	1H(50V)	1-1.8pF : M, 2.2-8.2pF : K 10-39pF : J only.

P.C. Board Parts of Tuner/Power Supply/DIN and Parts List

Tuner P.C. Board

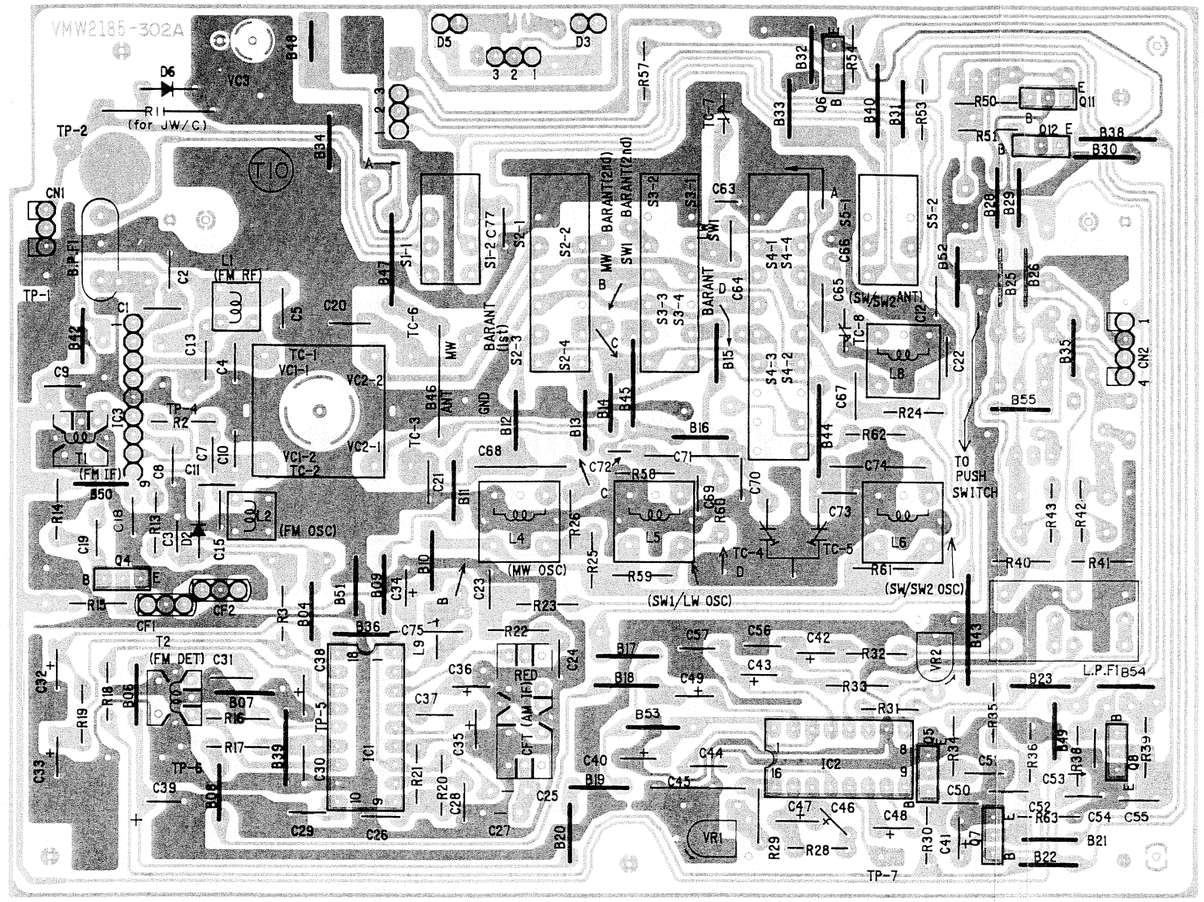
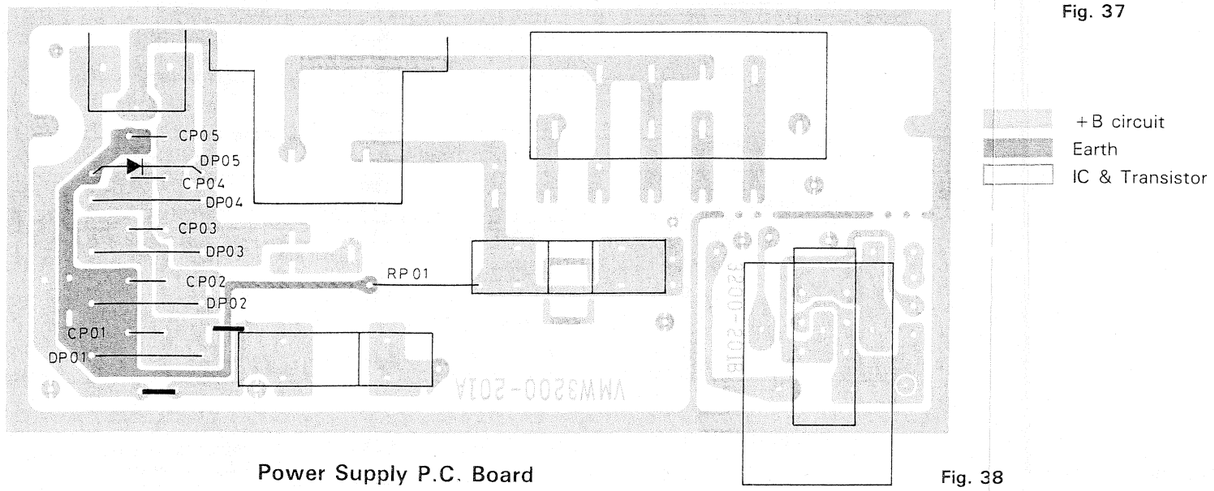


Fig. 37



Power Supply P.C. Board

Fig. 38

DIN P.C. Board

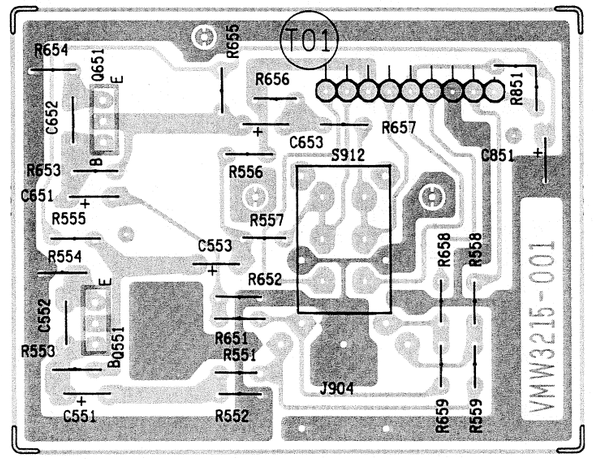


Fig. 39

DIN P.C. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	Q551 ,Q651	2SC1843(F)	TRANSISTOR		2
	CN851	QMV5004-007	CONNECTOR		1
	R554 ,R654	QRD141J-101	CARBON RESISTOR		2
	R556 ,R656	QRD141J-103	CARBON RESISTOR		2
	R553 ,R653	QRD141J-105	C RESISTOR		2
	R552 ,R652	QRD141J-272	C RESISTOR		2
	R555 ,R557	QRD141J-332	C RESISTOR		6
	R558 ,R655				
	R657 ,R658				
	R851	QRD141J-471	C RESISTOR		1
	R551 ,R651	QRD141J-682	C RESISTOR		2
	C552 ,C652	QCS11HJ-471	C.CAPACITOR		2
	C851	QET41AR-227	E CAPACITOR		1
	C551 ,C553	QET41HR-105	E.CAPACITOR		4
	C651 ,C653				
	J904	QMC9014-006	DIN SOCKET		1

Power Supply P.C. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
⚠	DP01 -DP05	20E1-B	SI.DIODE		5
⚠	SP01	QSS2325-107BS	SWITCH	PC-W330LB	1
⚠	CP01 -CP04	QCF11HP-103	C.CAPACITOR		4
⚠	CP06	QCF11HP-104	C.CAPACITOR		1
⚠	J902	QMA1221-004	DC JACK		1
⚠	J903	QMC0263-002UBS	AC SOCKET	PC-W330LB	1
⚠	J903	QMC0263-002U	AC SOCKET	PC-W330L	1
⚠	SP01	QSS2325-107BS	SLIDE SW	PC-W330 LB	1
⚠		QSS2325-107	SLIDE SW	PC-W330 L/LD	1
⚠		A44594-002	FUSE CLIP		2

Tuner P.C. Board Parts List

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	IC01	AN7222N	I.C.		1
	IC02	BA1332	I.C.		1
	IC03	TA7358P(N)	I.C.		1
	Q11 ,Q12	2SC2001(L,K)	TRANSISTOR		2
	Q04	2SC930(E)	TRANSISTOR		1
	Q05 -Q08	2SC945(P,Q)	TRANSISTOR		4
	D03	LN224RP	L.E.D.		1
	D05	LN324GP	L.E.D.		1
	D02	1S553T	VARI.CAPA.DIODE		1
	VR01	QVZ3512-103	V RESISTOR		1
	CN02	E04365-004	PLUG		1
	CN01	QMV5005-003	PLUG		1
	L03 ,L07	VQB012B-309	BAR ANTENNA		1
	L01	VQF1B12-001	RF COIL		1
	L04	VQM1S02-303	OSC COIL		1
	L08	VQR1001-202	ANTENNA COIL		1
	L06	VQS1S02-301	OSC COIL		1
	LF01	VQZ0020-001	LOW PASS FILTER		1
	L09	V03047-17	COIL		1
	L02	V03105-029	OSC COIL		1
	L05	46923-42	OSC COIL		1
	R18 ,R22	QRD161J-101	CARBON RESISTOR		3
	R24				
	R28 ,R59	QRD161J-102	CARBON RESISTOR		2
	R03 ,R64	QRD161J-103	CARBON RESISTOR		2
	R13 ,R35	QRD161J-104	CARBON RESISTOR		4
	R36 ,R53				
	R61	QRD161J-152	CARBON RESISTOR		1
	R39	QRD161J-155	C RESISTOR		1
	R38	QRD161J-183	CARBON RESISTOR		1
	R58	QRD161J-184	CARBON RESISTOR		1
	R02	QRD161J-220	CARBON RESISTOR		1
	R57	QRD161J-221	CARBON RESISTOR		1
	R19	QRD161J-222	CARBON RESISTOR		1
	R42 ,R43	QRD161J-272	CARBON RESISTOR		2
	R34	QRD161J-273	CARBON RESISTOR		1
	R16 ,R54	QRD161J-332	CARBON RESISTOR		2
	R14 ,R63	QRD161J-334	CARBON RESISTOR		2
	R23 ,R62	QRD161J-470	CARBON RESISTOR		2
	R15 ,R17	QRD161J-471	CARBON RESISTOR		4
	R25 ,R31				
	R21 ,R32	QRD161J-472	CARBON RESISTOR		5
	R33 ,R65				
	R66				
	R30	QRD161J-473	CARBON RESISTOR		1
	R26	QRD161J-560	CARBON RESISTOR		1
	R20	QRD161J-561	CARBON RESISTOR		1
	R29 ,R40	QRD161J-562	CARBON RESISTOR		5
	R41 ,R50				
	R51				
	R60	QRD161J-680	CARBON RESISTOR		1
	R04	QRD161J-821	CARBON RESISTOR		1
	C24 ,C31	QCC11EM-223	C.CAPACITOR		2
	C29	QCC11EM-333	C.CAPACITOR		1
	C44	QCC11EM-473	C.CAPACITOR		1

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	C02 ,C03	QCF11HP-103	C.CAPACITOR		13
	C09 ,C18				
	C19 ,C22				
	C25 ,C38				
	C50 -C54				
	C23 ,C26	QCF11HP-223	C.CAPACITOR		4
	C28 ,C77				
	C65	QCS11HJ-100	C.CAPACITOR		1
	C13 ,C20	QCS11HJ-150	C.CAPACITOR		3
	C75				
	C12 ,C30	QCS11HJ-151	C.CAPACITOR		2
	C01	QCS11HJ-200	C.CAPACITOR		1
	C04	QCS11HJ-220	C.CAPACITOR		1
	C70	QCS11HJ-270	C.CAPACITOR		1
	C63 ,C69	QCS11HJ-390	C.CAPACITOR		2
	C66	QCS11HJ-5R0	C CAPACITOR		1
	C07 ,C72	QCT05CH-100	C.CAPACITOR		2
	C08	QCT05CH-180	C.CAPACITOR		1
	C15	QCT05CH-200	C.CAPACITOR		1
	C11	QCT05CH-5R0	C.CAPACITOR		1
	C10	QCT05UJ-6R0	C.CAPACITOR		1
	C21	QCT05WK-150	C.CAPACITOR		1
	C73	QCT05YL-7R0	C CAPACITOR		1
	C27	QCY41HK-152	C.CAPACITOR		1
	C05	QCY41HK-472	C.CAPACITOR		1
	C46 ,C47	QEB41HM-474	LLC E CAPACITOR		2
	C37	QEN41EM-475	E CAPACITOR		1
	C39	QET41AM-477	E.CAPACITOR		1
	C34 ,C36	QET41AR-476	E CAPACITOR		3
	C40				
	C32 ,C33	QET41ER-106	E.CAPACITOR		2
	C35	QET41HR-105	E.CAPACITOR		1
	C41 -C43	QET41HR-335	E.CAPACITOR		4
	C49				
	C48	QET41HR-474	E.CAPACITOR		1
	C55	QET41HR-476	E CAPACITOR		1
	C45	QFS21HJ-102	P.S.CAPACITOR		1
	C71	QFS21HJ-151	P.S.CAPACITOR		1
	C68	QFS21HJ-361	P.S.CAPACITOR		1
	C74	QFS21HJ-392	P.S.CAPACITOR		1
	C56 ,C57	QFV41HJ-123	TF CAPACITOR		2
	CF01 ,CF02	VCF2L3B-301	CERAMICS FILTER		2
	CT01	VQT7A32-101	I.F.TRANSFORMER		1
	TC07 ,TC08	QAT2001-006	T CAPACITOR		2
	TC04 ,TC05	QAT2002-001	T CAPACITOR		1
	T01 ,T02	VQT7F12-104	I.F.TRANSFORMER		2
	VC01	QAP1224-520V	V.CAPACITOR		1
	VC03	QAT5001-003	M CAPACITOR		1
	BF01	VBP4M3B-001	B.PASS FILTER		1

Exploded View of Enclosure Assembly Parts

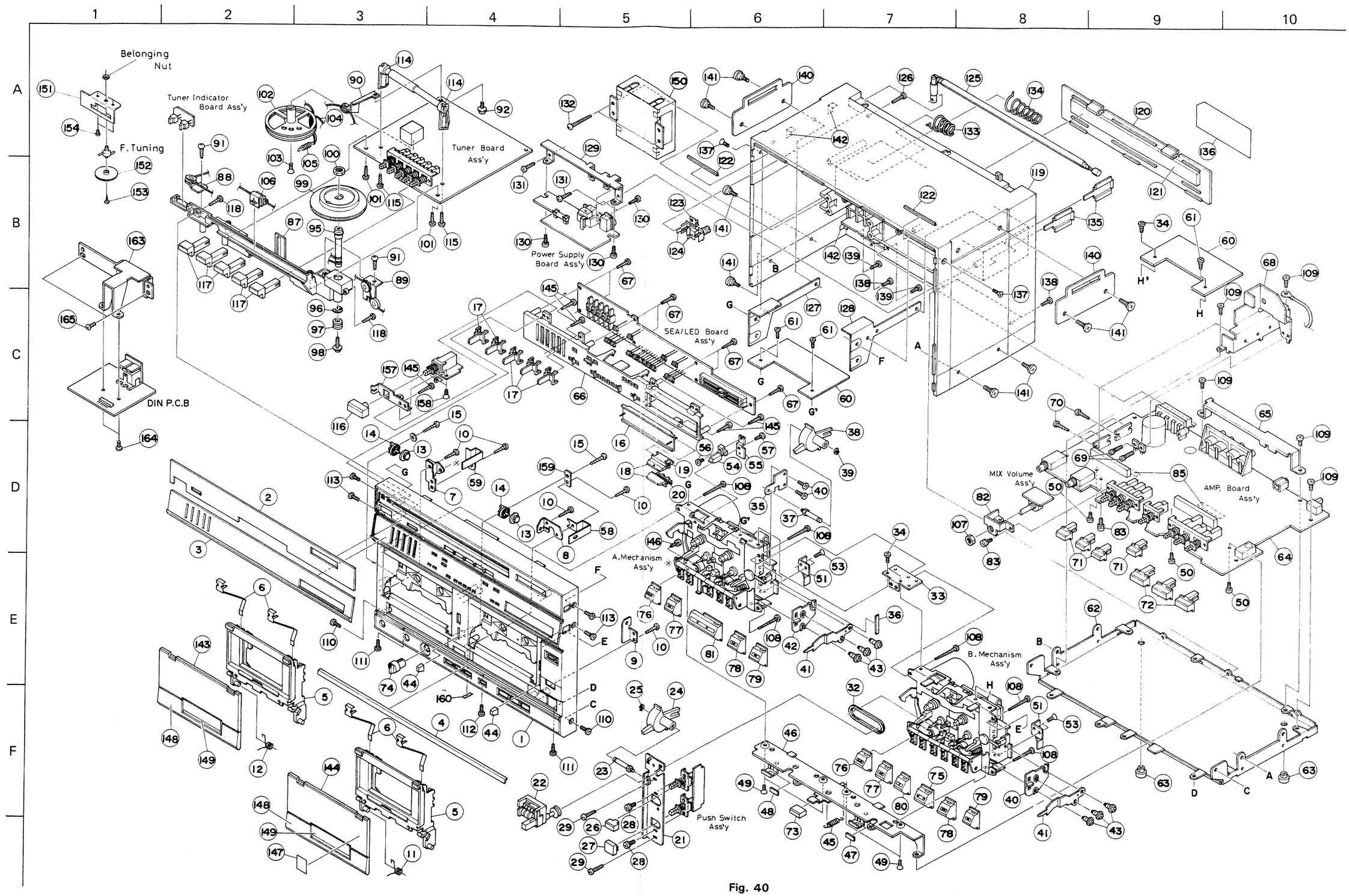


Fig. 40

Enclosure Assembly Parts

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	1~4,160	ZCPR330□-FSL	Front Cover Ass'y	Silver	1
		〃 -FBK	〃	Black	1
	1	VJC1396-006	Front Cover	Silver	1
	〃	〃 -009	〃	Black	1
	2	VJK3295-004	Dial Scale	PC-W330 L/LB Silver	1
	〃	〃 -007	〃	PC-W330 LD Silver	1
	〃	〃 -010	〃	PC-W330 L/LB Black	1
	〃	〃 -011	〃	PC-W330 LD Black	1
	3	VJD3509-003	Lens	Sea/LED	1
	4	VJD3510-001	Control Plate		1
	5,6	ZCPR330□-CH	Cassette Holder Ass'y		1
	5	VJT2102-001	Cassette Holder		2
	6	VKY4180-001	Cassette Spring		4
	7	VYH5650-001	Bracket		1
	8	VYH5651-001	〃		1
	9	VYH5674-001	〃		1
	10	SBSF3010Z	Screw		5
	11	VKW4441-003	Spring		1
	12	VKW4441-003	〃		1
	13	VYH5601-001	Gear		2
	14	VYH5602-001	Holder		2
	15	SBSF3012Z	Screw		2
	16	VJD4854-001	Volume Blind		1
	17	VXS4134-001	Slide Knob		5
	18	VXS4133-001	〃		2
	19	VYH5644-001	Holder		1
	20	〃 -002	〃		1
	21	VYH5645-001	Counter Bracket		1
	22	VKC5172-001T	Counter Ass'y		1
	23	VKH3008-003	Flange Shaft		1
	24	VXQ3039-002	Lever		1
	25	REE2500X	E Ring		1
	26	VXP4424-001	Push Knob	Synchro Cont	1
	27	VXP4425-001	〃	Rec. Muting	1
	28	LPSP3006Z	Screw	Switch	2
	29	SBSF3010Z	〃	Bracket	2
	32	VKB3000-071	Belt		1
	33	VYH5454-001	Bracket		1
	34	SPST2004Z	Screw		2
	35	VYH5434-001	Bracket		1
	36	VYSA1R4-067	Spacer		1
	37	VKH3008-003	Flange Shaft		2
	38	VXQ3039-002	Lever		1
	39	REE2500X	E Ring		1
	40	SPST2004Z	Screw		2
	41	VYH5435-002	Lever		2
	42	VYH5418-001	Slider		2
	43	VKZ4028-001	Special Screw		6
	44	VXQ4062-002	Cap		2
	45	VKW3002-043	Tension Spring		1
	46	VYH3248-00C	Bracket		1
	47	VYSS1R1-016	Spacer		1
	48	VYSS1R4-002	〃		1
	49	SSST3006Z	Screw		4
	50	SDST3008Z	〃		3
	51	VYH5508-003	Rec. Spring		2
	52	VYH3277-001	Shield Plate		1
	53	SSST2606Z	Screw		4
	54	VSH1132-002	Leaf Switch		1
	55	VYH5519-001	Bracket		1
	56	SDST2008Z	Screw		1

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	57	SPST2004Z	Screw		1
	58	VYH5757-001	Bracket	(R)	1
	59	VYH5758-001	〃	(L)	1
	60	VYH5539-001	Shield Plate		1
	61	SPST2004Z	Screw		2
	62	VJC2131-001	Bottom Cover		1
	63	VJF4007-002	Foot		2
	65	VYH3250-001	Bracket	Jack	1
	66	VYH2151-001	Holder		1
	67	SBSF2608Z	Screw		7
⚠	68	VYH3251-003	Radiation Plate		1
	69	SDST2608Z	Screw	Radiation	2
	70	SBSF2608Z	〃	I.C.	4
	71	VXP4375-001	Push Knob	DOLBY Metal	4
	72	VXP4376-001	〃	Aux Tape Tuner	3
	73	VXP4433-001	〃	Synchro Start	1
	74	VXL4136-002	Mixing Knob		1
	80	VXP3126-006	Rec Button	for B. Mechanism	1
	81	VXP3126-007	PLAY Button	for A. Mechanism	1
	82	VYH5438-001	Bracket	Mixing Switch	1
	83	LPSP3006Z	Screw	Mixing Bracket	2
	85	VYSA1R4-030	Spacer		2
	87	VYH2152-001	Chassis Base		1
	88	VYH5668-00A	Rollor B. Ass'y		1
	89	VYH5670-00A	〃		1
	90	VYH5444-00A	〃		1
	91	SBSF3008Z	T. Screw		2
	92	LPSP3006Z	Screw		1
	95	VYH5524-003	Tuning Shaft		1
	96	REE6000X	E Ring		1
	97	VYH5533-002	Pulley		1
	98	DPSP3008Z	Screw		1
	99	VXL4189-002	Tuning Knob		1
⚠	F901	QMF51A2-3R15BS	Fuse	PC-W330 LB	1
⚠	〃	〃 -3R15	〃	PC-W330 L/LD	1
	100	VKZ4019-001	Special Nut		1
	101	SBSF3010Z	Screw		2
	102	VYH3202-001	Dial Drum		1
	103	SSSP2608Z	Screw		1
	104	VHR2ZK9-05AT	Dial Cord		1
	105	50153-3	Spring		1
	106	VJN4093-002	Pointer		1
	107	VKZ4019-001	Special Nut		1
	108	SBSF3016Z	Screw		6
	109	SDST3008Z	〃		5
	110	SHST3006N	〃		2
	111	SDST3008N	〃		2
	112	SHST3006N	〃		1
	113	SDST3006N	〃		4
	114	VYH4803-001	T. Ant. Holder		2
	115	SBSF3008Z	T. Screw		2
	116	VXP4426-001	Push Button		1
	117	VXP4427-001	〃	Mode, Band	5
	118	SBSF3010Z	Screw		2
	119	VJC1314-014	Top Cover		1
	120,121	ZCPR330-BSL	Battery Cover Ass'y	Silver	1
	〃	〃 -BBK	〃	Black	1
	120	VJC2032-006	Battery Cover	〃	1
	121	VYSH106-020	Spacer		1
	122	VYSA1R4-050	〃		2
	123	VYH5070-003	Plate		1

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	124	V44814-00B	Terminal Ass'y		2
	125	VJA3005-001	Telescopic Ant.		1
	126	SDSP3010N	Screw		1
	127	VYH5649-001	Tapping Plate		1
	128	〃 -002	〃		1
	129	VYH5429-001	Bracket		1
	130	SDST3006Z	Screw		4
	131	SBSF3008Z	T. Screw		2
	132	SBSF4025Z	〃		2
	133	VYH4057-001	Battery Spring		1
	134	V44686-002	Spring		1
	135	VYH4044-001	Battery Contact		2
⚠	136	VYN7020-007	Name Plate	PC-W330 LB	1
	〃	〃 -006	〃	PC-W330 L	1
	〃	〃 -009	〃	PC-W330 LD	1
	137	SHST3006N	Screw		2
	138	SDST3008N	〃		3
	139	SDSF3010N	〃		2
	140	VJD4760-001	Frame	Silver	2
	〃	〃 -002	〃	Black	2
	141	VKZ4172-001	Special Screw		4
	142	VYSA1R4-050	Spacer		2
	143,148	ZCPR330□-CLSLA	Cassette Door Ass'y	Silver	1
	149	ZCPR330□-CLBKB	〃	Black	1
	143	VJT3137-001	Door		1
	144	VJT3137-002	〃		1
	147	VND4090-005	Caution Label		1
	148	VJD3514-003	Escutcheon	Silver	2
	〃	〃 -004	〃	Black	2
	149	VJD3511-001	Mark Plate		2
⚠	150	VTP09N2-12EP	Power Trans	PC-W330 L/LD	1
⚠	〃	VTP09N2-12EPBS	〃	PC-W330 LB	1
	151	VYH5705-001	Bracket	Fine Tuning	1
	152	VXL4261-001	Knob	〃	1
	153	SSSP2004Z	Screw		1
	154	SBSF2606Z	〃		2
	157	VYH5691-001	Bracket		1
	158	SDST2606Z	Screw		2
	158-1	WAS2600N	Washer		1
	159	VYH5764-001	Plate		1
	160	VYSS1R3-013	Spacer		1
	161	Q03091-138	Washer		1
	162	SDST3008Z	Screw		2
	163	VYH5587-001	DIN Bracket		1
	164	SDST2606Z	Screw		2
	165	SBSF3008Z	T. Screw		1

NOTE:
Entry of the assembly part number

ZCPR330□-FSL

└—Enter the code name which is on the name plate and order the part.

Mechanism Component Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
		V44743-001	MONOHIRA		6
	1	VKL1223-00J	CHASSIS ASS'Y		1
	2	VKL3448-001	F/R SWITCH CAM		1
	3	VKL3449-002	MOTOR SW.CAM		1
	4	VKL3450-001	LOCK CAM		1
	5	VKL3451-002	MS. CAM		1
	6	Q03093-631	WASHER		2
	7	VKL5421-002	C.R. LEVER (B)		1
	8	VKL5422-002	DIR.LEVER		1
	9	REE1500	E.RING		1
	10	VSH1130-001	LEAF SWITCH		1
	11	SPSH2040M	SCREW		1
	12	VKW3002-127	TENSION SPRING	LOCK CAM	1
	13	VKW4508-001	CR.LEVER SPRING		1
	14	VKS4662-001	GUIDE		2
	15	SPSX2010Z	SCREW	CASSETTE GUIDE	2
	16	VKS4541-001	GUIDE POST		1
	17	VKZ4248-208	MINI SCREW		1
	18	VKS4542-003	LOCK ARM		1
	19	VKH3001-056	FLANGE COLLAR		1
	20	LPSP2005Z	SCREW	LOCK ARM	1
	21	VKW3002-165	SPRING	LOCK ARM	1
	22	VKY4300-001	PACK SPRING		1
	23	VSH1123-004	LEAF SWITCH		3
	24	SPSH1755M	SCREW		3
	25	VKS3163-001	AUTO SAFETY LEVER		1
	26	VKW3008-003	TORSION SPRING		1
	27	VKL3452-00Q	B.FRAME ASS'Y		1
	32	SSSK2030M	MINI SCREW	BUTTON BRACKET FRAME	2
	33	VKP3000-00D	P. ROLLER ASS'Y	FWD.	1
	34	VKP3000-00E	P. ROLLER ASS'Y	REV.	1
	35	VKW4415-002	P.ROLLER SPRING	FWD.	1
	36	VKW4416-002	P.ROLLER SPRING	REV.	1
	37	VKZ4004-002	SPECIAL WASHER		2
	38	VKZ3108-002	SLIDE BASE		1
	39	VKL5842-001	SLIDE BASE(2)		1
	40	VKW3002-129	TENSION SPRING	SLIDE BASE	1
	41	VKL3454-00G	H.M.BASE ASS'Y		1
	47	VGH0425-517	R/P&E.HEAD ASSY		1
	48	VKZ4216-001	STOPPER		1
	49	VKZ4240-001	SCREW		2
	50	SPSH2018M	SCREW		1
	51	VKZ4001-013	WIRE HOLDER		1
	52	T41615-004	STEEL BALL		1
	53	VKZ4248-203	SCREW		1
	54	VKY4301-001	HEAD BASE SP.		1
	55	SPSH2025M	SCREW		2
	56	VKS4544-00E	DIR.TRIGER ASSY		1
	57	VKW3008-002	TORSION SPRING		1
	58	VKR3109-003	CAM GEAR(A)		1
	59	VKR3110-003	CAM GEAR(B)		1
	60	VKS4546-001	LEVER		1
	61	VKS4591-00B	C.R.TRIGGER ASS'Y		1
	62	VKW4409-001	SPRING	C.R.TRIGGER	1
	63	VKR3111-003	GEAR		1

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	64	VKS4548-002	PLAY LEVER		1
	65	VKW3002-131	TENSION SPRING	PLAY LEVER	1
	66	VKR3112-003	PLAY CAM GEAR		1
	67	VKS4604-002	SYNCHRO LEVER		1
	68	VKZ4004-002	SPECIAL WASHER		9
	69	VGP0704-005	SOLENOID		1
	70	VKZ4248-206	MINI SCREW		1
	71	VKL3496-001	REC. SLIDE BAR		1
	72	VKS4550-002	REC.S.LEVER	REC.SELECT	1
	73	VKW3002-132	TENSION SPRING		1
	74	VKL5512-002	REC LEVER		1
	75	REE3000	E.RING		1
	77	VKF3128-00B	FLYWHEEL ASS'Y		1
	78	VKF3127-00B	FLYWHEEL ASS'Y		1
	79	Q03093-827	WASHER		2
	80	Q03093-522	WASHER	OIL CUT	2
	81	VKS4552-004	PAUSE LOCK CAM		1
	82	VKW3001-122	COMPRESSION SP.		1
	83	VKZ4004-002	SPECIAL WASHER		1
	84	VKB3001-010H	CAPSTAN BELT		1
	85	VKB3000-070	BELT	REEL	1
	86	VKL3497-002	F.M.BRACKET		1
	87	VKS3171-001	THRUST PLATE		1
⚠	88	BFB9L71	DC MOTOR		1
	89	VKR4364-002	MOTOR PULLEY		1
	90	SPSH2630M	SCREW		2
	91	SPST2004Z	SCREW	F.M. BRACKET	2
	92	VSH1123-005	LEAF SWITCH	DIRECTION/MUTING	3
	93	VKZ4218-001	SCREW		3
	95	VKL2195-00H	BRACKET ASS'Y	REEL DISK	1
	96	VKR3113-001	REEL FEATHER		2
	97	VKH3012-032	SHAFT		2
	99	VKR4331-001	COUNTER PULLEY		2
	100	VKS4553-001	AUTO LEVER (1)		2
	101	VKS4554-001	BUSHING		2
	102	VKS3185-001	AUTO STOP BAR		1
	103	VKR4332-002	REEL GEAR(R)		1
	104	VKR4333-002	REEL GEAR(F)		2
	105	VKR4334-001	F/R GEAR (2)		2
	106	VKR4382-001	MIDDLE GEAR		1
	107	VKR4336-002	CAM GEAR		1
	108	VKR4337-003	MAIN PULLEY		1
	109	VKR4338-00C	M. PULLEY ASS'Y		1
	110	VKR4340-00B	T-UP GEAR ASS'Y		2
	111	VKZ4004-013	WASHER		9
	112	VKW3002-152	TENSION SPRING	FF	1
	113	VKW3002-151	TENSION SPRING		2
	114	VKZ4248-203	SCREW		3
	115	Q03093-115	WASHER		1
	116	VKS2124-00F	SELECT UNIT		1
	117	SPSH2025M	SCREW		3
	118	VKW3006-090	TORSION SPRING	REC. SAFETY	1
	119	VKS3174-001	REC.S.LEER	REC.SAFETY	1
	120	VKS3175-001	REC. SAFETY (R1)		1
	121	VKS4578-002	REC. SAFETY (R2)		1

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	122	VKS3177-001	HEAD BAR		1
	123	VKS4568-001	CENTER BLOCK		1
	124	VKW3006-087	TORSION SPRING		1
	125	VKW3006-086	TORSION SPRING		1
	126	VKZ4248-203	SCREW		1
	127	VKL3458-002	U-REC. BAR		1
	128	VKW3002-133	TENSION SPRING	U-REC. BAR	1
	129	VKW4414-001	TORSION SPRING	U-REC. BAR	1
	130	VYSA1R3-008	SPACER		1
	134	WBS2000N	T. LOCK WASHER		1
	135	SDST2005Z	SCREW		2
	136	VMW4671-002	PRINTED BOARD	LEAF SWITCH	1
	137	VKZ4004-002	SPECIAL WASHER		2
	138	VKW3002-156	TENSION SPRING	SE.BAR	1
	142	VKW3002-153	TENSION SPRING	REW	1
	143	VKW4447-001	TENSION SPRING		2
	145	VKW4458-001	TORSION SPRING		1
	147	VKL5614-002	CAS.GUIDE BKT.		2
	148	VKW3001-135	SPRING		2
	150	VKZ4248-203	SCREW		1
	151	VKZ4001-013	WIRE HOLDER		1
	98	THIS DWG	Spring		2
	149	Q03093-115	Washer		1

Comparison Table between A Mechanism and B Mechanism

Ref. No.	A Mechanism Parts No.	Q'ty	B Mechanism Parts No.	Q'ty	Parts Name
27	VKL3452-00R	1	VKL3452-00Q	1	But. Frame Ass'y
47	VGH0424-016	1	———	—	E/P Head Ass'y
〃	———	—	VGH0425-517	1	R/P & E Head Ass'y
48	VKZ4225-001	1	VKZ4216-001	1	Wire Stopper
67	VKS4549-004	1	———	—	MS Lever
〃	———	—	VKS4604-002	1	Synchro Lever
69	VGP0704-002	1	VGP0704-005	1	DC Solenoid
73	VKW3002-140	1	VKW3002-132	1	Tension Spring
74	———	—	VKL5512-002	1	Rec. Lever
75	———	—	REE3000	1	E. Ring
76	VKW3002-132	1	———	—	Tension Spring
92	VSH1123-005	2	VSH1123-005	3	Leaf SW
93	VKZ4218-001	2	VZK4218-001	3	Special Screw
102	VKS4555-001	1	VKS3185-001	1	Auto Stop Bar
118	———	—	VKW3006-090	1	Torsion Spring
119	———	—	VKS3174-001	1	Rec. Safety (L)
120	———	—	VKS3175-001	1	〃 (R1)
121	———	—	VKS4578-002	1	〃 (R2)
124	———	—	VKW3006-087	1	Torsion Spring
125	———	—	VKW3006-086	1	〃
127	———	—	VKL3458-002	1	U-Rec Bar
128	———	—	VKW3002-133	1	Tension Spring
129	———	—	VKW4414-001	1	〃
—	VMW3201-201		VMW3201-101	1	P.C. Board

Exploded View of Mechanical Component Parts

:A ---- A, mechanism only
:B ---- B, mechanism only

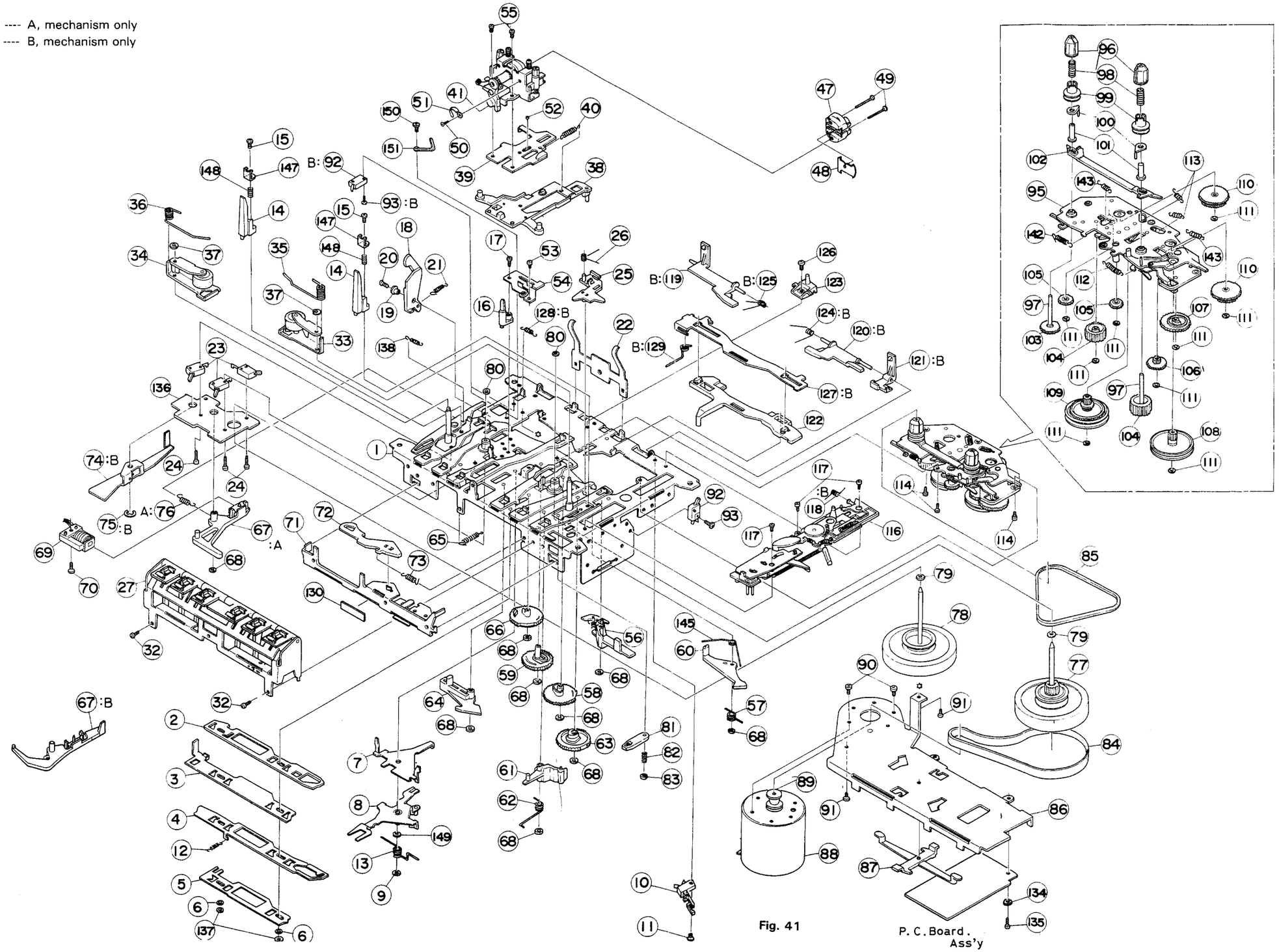


Fig. 41

Exploded View, Connection Figure and Parts List for Speaker

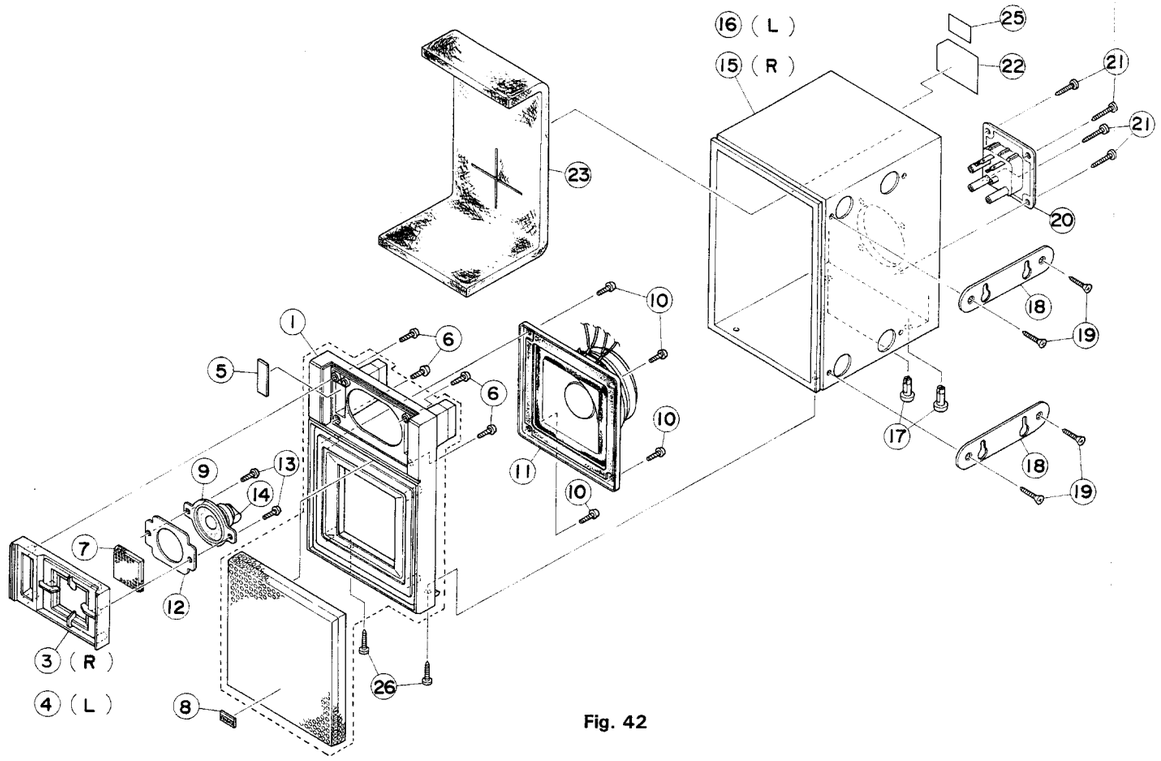


Fig. 42

Replacement of speaker (Refer to the exploded view)

1. Remove two screws (26) then front cover (1).
2. Remove six screws (10) and (13) to take out the speaker.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	VJC2166-00A	FRONT PANEL ASS'Y	SILVER	1
	2	VJD3505-002	PANCHING PANEL		1
	3	VJD2239-001	GRILL	RIGHT SIDE	1
	4	VJD2239-002	GRILL	LEFT SIDE	1
	5	VYSB1R1-006	SPACER		1
	6	SBSF3008Z	T.SCREW		4
	7	VJD4843-001	PANCHIN PANEL	FOR TWEETER	1
	8	VJD4636-001	MARK		1
	9	EAS12S01S	CONE SPEAKER		1
	10	SBSF3008Z	T.SCREW		4
	11	EAS5PH04ST	CONE SPEAKER	TWEETER	1
	12	VJD4853-001	SPACER		1
	13	SBSF3008Z	T.SCREW		2
	14	VCE0002-225	E.CAPACITOR		1
	15	VJC2156-001	REAR CABINET	RIGHT SIDE	1
	16	VJC2156-002	REAR CABINET	LEFT SIDE	1
	17	VJF4009-001	FOOT		2
	18	VYH4891-004	PLATE		2
	19	SSSA3012N	SCREW		4
	20	VMZ0026-001	SPK.TERMINAL		1
	21	SDSA3012N	SCREW		4
	22	VYNA317-002	NAME PLATE		1
	24	VKZ4145-001	SOUND ABSOBER		1
	25	VNC5003-206	SERIAL LABEL		1
	26	SDSA3012Z	SCREW		2

Comparison Table between Silver Type and Black Type

Ref. No.	PC-W330 Silver Type Parts No.	Q'ty	PC-W330 Black Type Parts No.	Q'ty	Parts Name
1	VJC2166-00A	1	VJC2166-00C	1	Front Panel Ass'y
15	VJC2156-001	1	VJC2156-005	1	Rear Cabinet
16	VJC2156-002	1	VJC2156-006	1	〃
18	VYH4891-004	1	VYH4891-006	1	Plate

Connection Figure

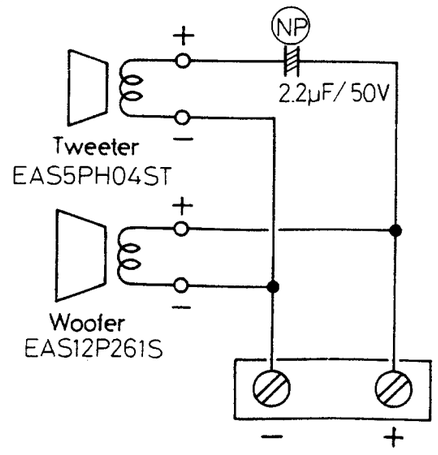


Fig. 43

Packing

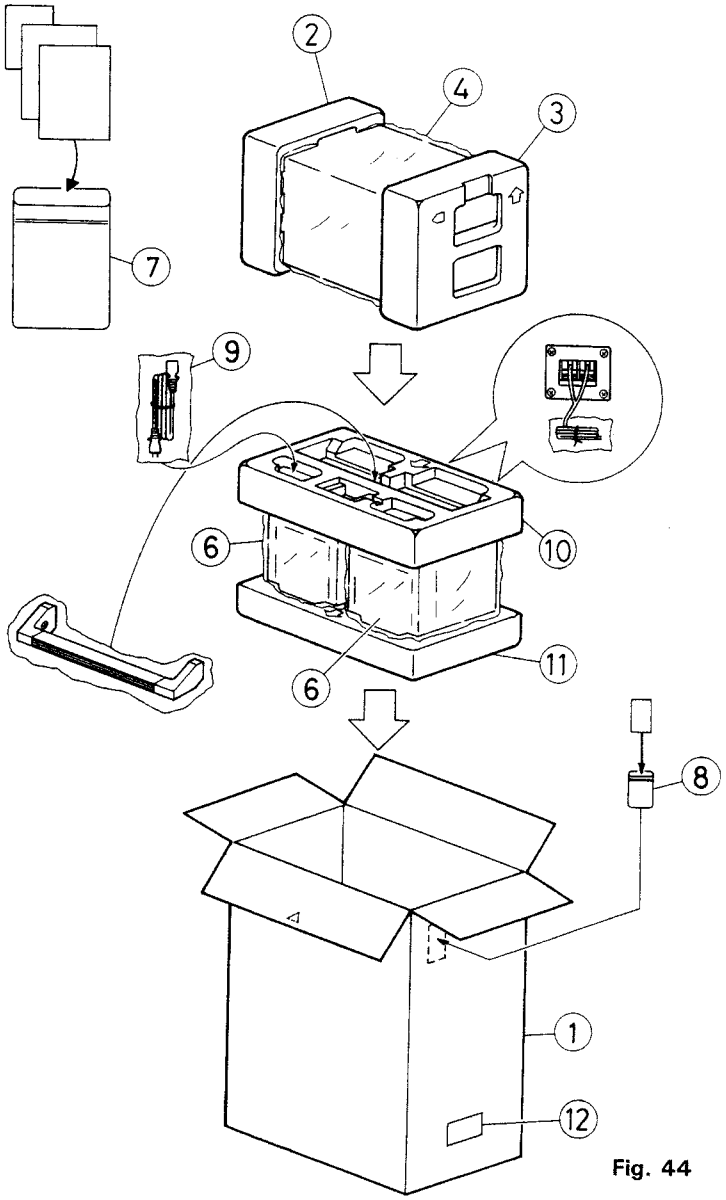


Fig. 44

Packing Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	1	VPC7020-004	Carton	PC-W330 L	1
	〃	〃 -005	〃	PC-W330 LB	1
	〃	〃 -015	〃	PC-W330 LD	1
	2	VPH1307-001	Side Cushion	Left Side	1
	3	VPH1308-001	〃	Right Side	1
	4	VPK4002-008	Sheet	for Receiver	1
	5	VPE3004-025	Poly Bag	〃	1
	6	〃 -018	〃	for Speaker	2
	7	〃 -007	〃	for Inst. Book	1
	8	E66416-003	Envelope	for Warranty	1
	9	QPGA012-01505	Poly Bag	for Power Cord	1
	10	VPH1305-001	Cushion	Upper	1
	11	VPH1306-001	〃	Lower	1
	12	VPZ4001-001	S. Ticket		1

Accessories

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Part No.	Parts Name	Remarks	Q'ty
	VJH3019-00H	Handle Ass'y	Silver	1
	〃 -00M	〃	Black	1
⚠	QMP3950-183	Power Cord	PC-W330 L/LD	1
⚠	QMP9017-009BS	〃	PC-W330 LB	1
	VNM0977-301	Instruction Book		1
	〃 -801	〃	PC-W330 L (Holand)	1
	VNF0975-001	Feature Sticker	PC-W330 L/LB ~ #1500	1
	〃 -002	〃	〃 #1501 ~	1
	BT20060	Guarantee Cert	PC-W330 LB	1
	BT20066	〃	〃	1
	QZL1002-003	Warning Label	〃	1
	31465-18	Mark	〃	1

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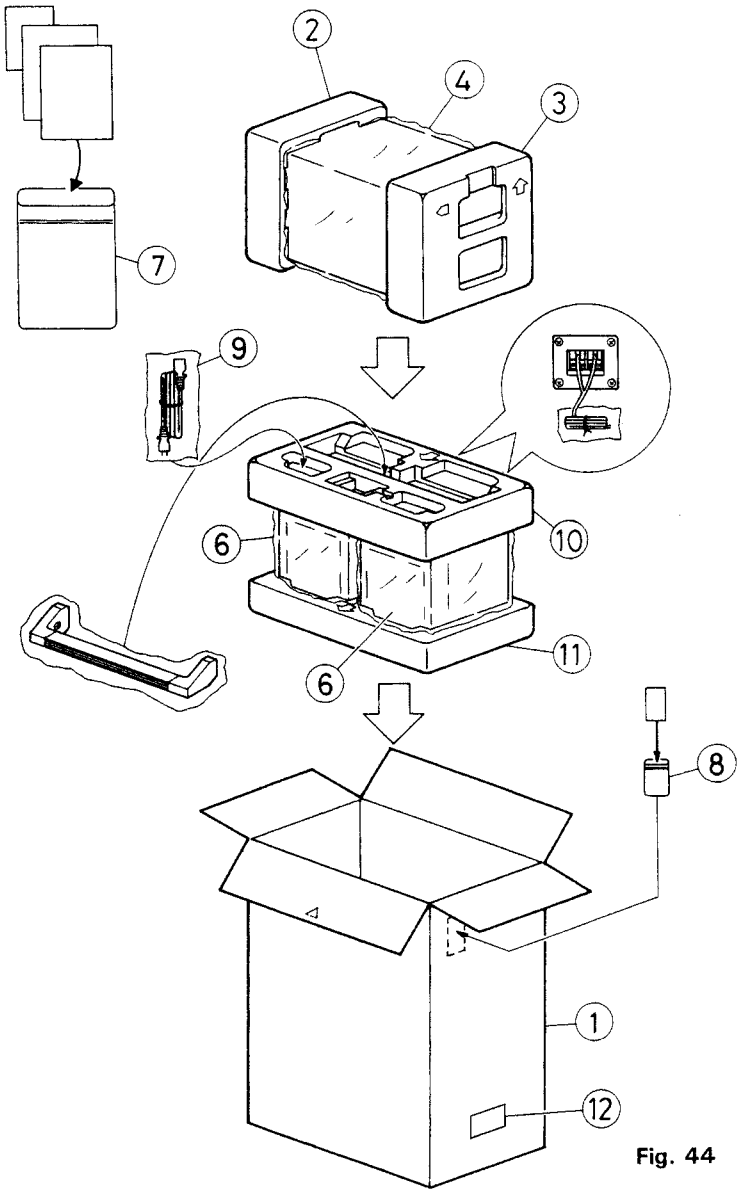

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	3	VPH1308-001	〃	Right Side	1
	4	VPK4002-008	Sheet	for Receiver	1
	5	VPE3004-025	Poly Bag	〃	1
	6	〃 -018	〃	for Speaker	2
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⚠	QMP9017-009BS	〃	PC-W330 LB	1
	VNM0977-301	Instruction Book		1
	〃 -801	〃	PC-W330 L (Holand)	1
	VNF0975-001	Feature Sticker	PC-W330 L/LB～#1500	1
	〃 -002	〃	〃 #1501～	1
	BT20060	Guarantee Cert	PC-W330 LB	1
	BT20066	〃	〃	1
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	31465-18	Mark	〃	1

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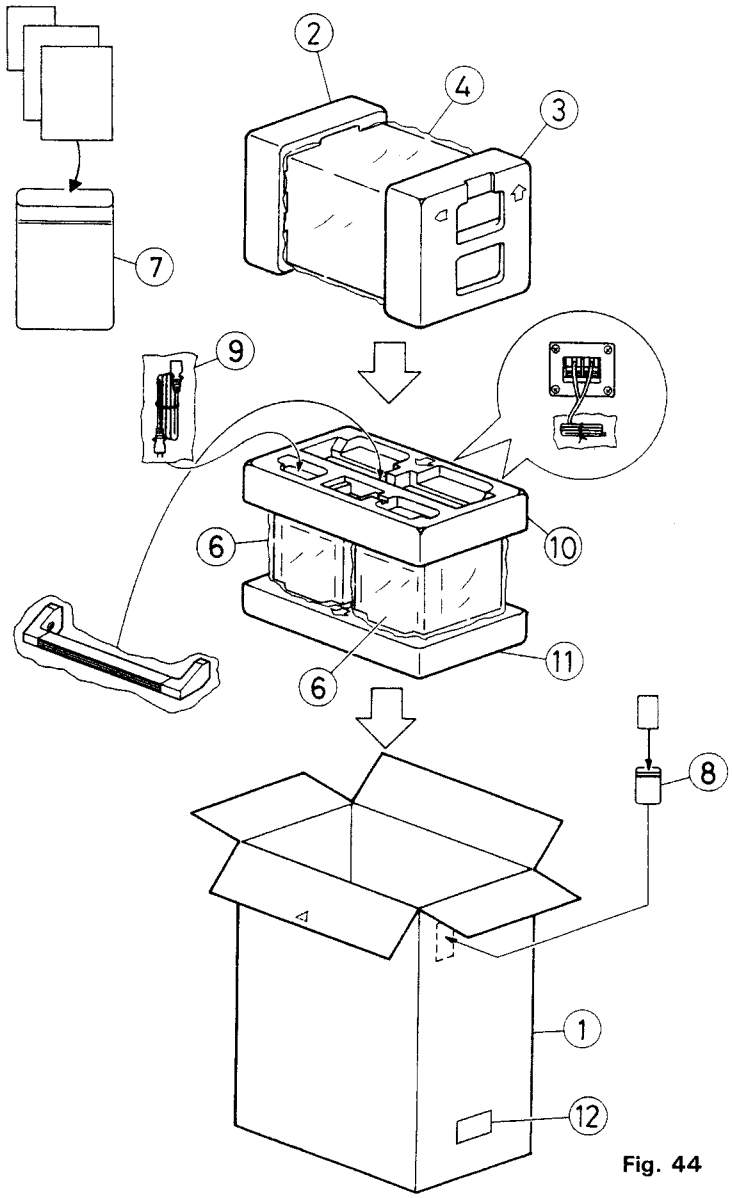

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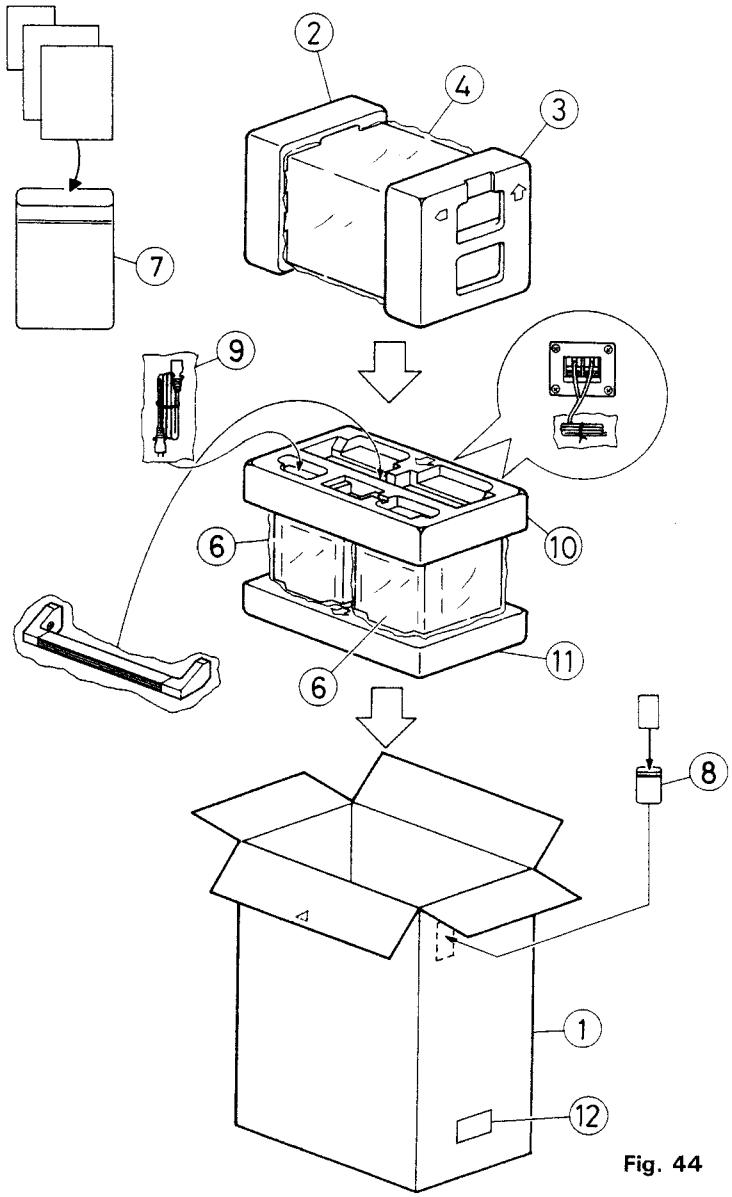

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	VNM0977-301	Instruction Book		1
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